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UNITED STATES DEPARTMENT OF COMMERCE
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WEATHER BUREAU - - F. W. Reichelderfer, *Chief*

# MONTHLY WEATHER REVIEW

## MARCH 1945

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JUN 22 '45

# MONTHLY WEATHER REVIEW

Editor, Temporarily Vacant

VOL. 73, No. 3
W. B. No. 1432

MARCH 1945

CLOSED MAY 5, 1945
ISSUED JUNE 5, 1945

## METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR MARCH 1945

### AEROLOGICAL OBSERVATIONS

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during March 1945*

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

| Altitude (meters) m. s. l. | Albany, N. Y. (86 m.) | | | | Albuquerque, N. Mex. (1620 m.) | | | | Apalachicola, Fla. (5 m.) | | | | Atlanta, Ga. (300 m.) | | | | Big Spring, Tex. (774 m.) | | | | Bismarck, N. Dak. (505 m.) | | | | Boise, Idaho (868 m.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity |
| Surface | 31 | 1,005 | 4.1 | 74 | 31 | 834 | 7.9 | 35 | 31 | 1,018 | 18.9 | 88 | 31 | 984 | 14.9 | 72 | 29 | 923 | 15.1 | 47 | 31 | 950 | 0.3 | 83 | 30 | 913 | 4.8 | 62 |
| 500 | 31 | 956 | 4.9 | 65 | | | | | 31 | 962 | 18.9 | 61 | 31 | 961 | 15.6 | 66 | | | | | | | | | | | | |
| 1,000 | 31 | 899 | 3.1 | 65 | | | | | 31 | 907 | 16.4 | 53 | 31 | 906 | 13.8 | 60 | 29 | 899 | 15.9 | 41 | 31 | 893 | 1.5 | 65 | 30 | 898 | 5.1 | 56 |
| 1,500 | 31 | 844 | 0.6 | 64 | | | | | 31 | 855 | 13.3 | 51 | 30 | 853 | 11.1 | 57 | 29 | 847 | 12.1 | 36 | 31 | 839 | −0.8 | 59 | 30 | 845 | 2.2 | 55 |
| 2,000 | 31 | 793 | −1.7 | 55 | 31 | 796 | 6.3 | 36 | 31 | 805 | 10.8 | 41 | 30 | 803 | 8.7 | 54 | 29 | 798 | 10.1 | 35 | 31 | 788 | −3.1 | 56 | 30 | 793 | −1.7 | 61 |
| 2,500 | 31 | 745 | −3.7 | 45 | 31 | 749 | 2.3 | 39 | 31 | 758 | 8.9 | 31 | 30 | 756 | 6.2 | 46 | 29 | 751 | 7.0 | 30 | 31 | 740 | −5.8 | 62 | 30 | 745 | −5.5 | 69 |
| 3,000 | 31 | 698 | −5.8 | 43 | 31 | 703 | −1.8 | 46 | 31 | 714 | 6.6 | -- | 30 | 711 | 3.4 | 37 | 29 | 706 | 3.5 | 29 | 31 | 693 | −8.8 | 63 | 30 | 698 | −8.9 | 72 |
| 4,000 | 30 | 614 | −10.9 | ---- | 31 | 620 | −9.2 | 52 | 30 | 631 | 0.9 | ---- | 30 | 628 | −2.0 | 36 | 29 | 627 | −4.0 | 33 | 30 | 609 | −14.1 | 58 | 29 | 613 | −14.2 | 66 |
| 5,000 | 30 | 538 | −17.3 | ---- | 29 | 544 | −15.8 | ---- | 30 | 557 | −4.8 | ---- | 30 | 553 | −8.1 | 36 | 28 | 548 | −10.9 | ---- | 30 | 533 | −20.3 | 58 | 29 | 537 | −20.5 | 59 |
| 6,000 | 30 | 470 | −24.1 | ---- | 28 | 476 | −22.7 | ---- | 30 | 489 | −11.7 | ---- | 30 | 485 | −14.5 | ---- | 28 | 480 | −17.8 | ---- | 30 | 465 | −26.9 | ---- | 29 | 468 | −27.3 | ---- |
| 7,000 | 30 | 409 | −31.0 | ---- | 27 | 414 | −29.7 | ---- | 30 | 429 | −18.7 | ---- | 29 | 425 | −22.0 | ---- | 28 | 420 | −24.7 | ---- | 30 | 404 | −34.8 | ---- | 29 | 407 | −34.5 | ---- |
| 8,000 | 30 | 355 | −37.5 | ---- | 26 | 359 | −36.4 | ---- | 30 | 374 | −26.3 | ---- | 28 | 370 | −29.5 | ---- | 27 | 365 | −32.1 | ---- | 29 | 349 | −42.3 | ---- | 28 | 352 | −40.7 | ---- |
| 9,000 | 30 | 306 | −43.7 | ---- | 26 | 310 | −43.1 | ---- | 27 | 325 | −33.7 | ---- | 28 | 321 | −36.8 | ---- | 26 | 316 | −38.7 | ---- | 28 | 300 | −48.6 | ---- | 28 | 303 | −47.0 | ---- |
| 10,000 | 29 | 263 | −49.4 | ---- | 26 | 267 | −48.7 | ---- | 26 | 282 | −41.2 | ---- | 27 | 277 | −43.7 | ---- | 26 | 273 | −45.4 | ---- | 24 | 257 | −52.3 | ---- | 25 | 260 | −52.5 | ---- |
| 11,000 | 29 | 226 | −54.6 | ---- | 25 | 229 | −52.5 | ---- | 25 | 242 | −48.8 | ---- | 26 | 238 | −49.9 | ---- | 25 | 234 | −51.5 | ---- | 20 | 220 | −52.6 | ---- | 23 | 223 | −55.5 | ---- |
| 12,000 | 28 | 193 | −56.4 | ---- | 24 | 196 | −54.5 | ---- | 22 | 208 | −54.6 | ---- | 25 | 204 | −53.9 | ---- | 24 | 200 | −54.6 | ---- | 18 | 188 | −52.8 | ---- | 17 | 190 | −54.8 | ---- |
| 13,000 | 23 | 164 | −55.7 | ---- | 19 | 168 | −54.6 | ---- | 20 | 178 | −58.6 | ---- | 21 | 174 | −57.0 | ---- | 22 | 171 | −56.0 | ---- | 14 | 162 | −51.1 | ---- | 14 | 162 | −52.1 | ---- |
| 14,000 | 15 | 141 | −56.0 | ---- | 13 | 144 | −57.0 | ---- | 13 | 152 | −61.7 | ---- | 18 | 148 | −61.0 | ---- | 20 | 146 | −59.3 | ---- | 10 | 139 | −49.8 | ---- | 9 | 139 | −52.7 | ---- |
| 15,000 | 8 | 121 | −56.9 | ---- | 6 | 122 | −59.7 | ---- | 10 | 129 | −67.5 | ---- | 11 | 126 | −63.3 | ---- | 14 | 124 | −61.8 | ---- | 8 | 120 | −51.3 | ---- | 5 | 120 | −52.9 | ---- |
| 16,000 | | | | | | | | | 8 | 110 | −71.9 | ---- | | | | | 7 | 105 | −64.2 | ---- | 5 | 103 | −52.1 | ---- | | | | |

| Altitude (meters) m. s. l. | Brownsville, Tex. (6 m.) | | | | Buffalo, N. Y. (221 m.) | | | | Caribou, Maine (193 m.) | | | | Charleston, S. C. (14 m.) | | | | Denver, Colo. (1,616 m.) | | | | Dodge City, Kans. (787 m.) | | | | El Paso, Tex. (1,195 m.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity |
| Surface | 31 | 1,012 | 21.8 | 86 | 31 | 989 | 5.3 | 75 | 30 | 990 | −3.1 | 82 | 30 | 1,018 | 15.6 | 85 | 31 | 832 | 4.8 | 45 | 31 | 920 | 7.6 | 59 | 31 | 878 | 14.1 | 26 |
| 500 | 31 | 956 | 19.7 | 78 | 31 | 958 | 5.9 | 66 | 30 | 953 | −2.6 | 74 | 30 | 962 | 17.0 | 63 | | | | | | | | | | | | |
| 1,000 | 31 | 902 | 19.0 | 54 | 31 | 899 | 3.7 | 63 | 30 | 894 | −4.4 | 71 | 30 | 907 | 14.6 | 58 | | | | | 31 | 897 | 9.0 | 50 | | | | |
| 1,500 | 31 | 851 | 17.1 | 47 | 31 | 846 | 1.7 | 55 | 30 | 839 | −5.6 | 70 | 30 | 855 | 11.6 | 57 | | | | | 31 | 844 | 8.4 | 41 | 31 | 847 | 13.5 | 24 |
| 2,000 | 31 | 802 | 15.2 | 41 | 31 | 794 | 0.0 | 47 | 30 | 787 | −7.0 | 69 | 30 | 805 | 9.3 | 47 | 31 | 793 | 4.2 | 39 | 31 | 794 | 5.8 | 35 | 31 | 798 | 9.7 | 26 |
| 2,500 | 31 | 756 | 13.0 | 23 | 31 | 746 | −2.4 | 46 | 30 | 738 | −8.5 | 61 | 30 | 758 | 6.8 | 42 | 31 | 746 | 0.8 | 40 | 31 | 747 | 2.1 | 34 | 31 | 751 | 5.7 | 30 |
| 3,000 | 31 | 712 | 10.2 | 21 | 31 | 700 | −4.9 | 47 | 30 | 692 | −10.4 | 57 | 30 | 712 | 4.0 | 39 | 31 | 700 | −2.8 | 45 | 31 | 701 | −1.4 | 35 | 31 | 706 | 2.1 | 31 |
| 4,000 | 30 | 630 | 2.4 | 24 | 30 | 616 | −10.7 | 50 | 30 | 607 | −15.4 | 58 | 30 | 629 | −1.7 | 32 | 31 | 616 | −10.6 | 52 | 31 | 618 | −8.3 | 40 | 31 | 623 | −5.1 | ---- |
| 5,000 | 30 | 556 | −5.4 | ---- | 30 | 540 | −16.7 | ---- | 29 | 530 | −21.8 | 61 | 29 | 554 | −7.7 | ---- | 31 | 540 | −18.1 | 58 | 31 | 542 | −15.1 | 41 | 30 | 547 | −11.7 | ---- |
| 6,000 | 30 | 488 | −12.7 | ---- | 29 | 472 | −23.1 | ---- | 29 | 462 | −28.4 | ---- | 29 | 486 | −14.1 | ---- | 30 | 472 | −25.5 | ---- | 31 | 474 | −21.8 | ---- | 30 | 479 | −18.9 | ---- |
| 7,000 | 30 | 428 | −20.5 | ---- | 28 | 411 | −29.6 | ---- | 29 | 401 | −35.0 | ---- | 29 | 426 | −21.4 | ---- | 30 | 410 | −33.0 | ---- | 31 | 413 | −29.3 | ---- | 28 | 419 | −26.0 | ---- |
| 8,000 | 29 | 373 | −28.0 | ---- | 28 | 357 | −36.5 | ---- | 29 | 347 | −42.4 | ---- | 28 | 371 | −28.6 | ---- | 29 | 356 | −40.2 | ---- | 31 | 358 | −36.5 | ---- | 27 | 364 | −33.1 | ---- |
| 9,000 | 28 | 324 | −35.6 | ---- | 24 | 309 | −43.3 | ---- | 29 | 299 | −49.1 | ---- | 28 | 322 | −36.0 | ---- | 28 | 306 | −47.0 | ---- | 30 | 310 | −42.8 | ---- | 24 | 315 | −40.0 | ---- |
| 10,000 | 26 | 280 | −43.0 | ---- | 20 | 266 | −49.5 | ---- | 28 | 256 | −53.3 | ---- | 27 | 278 | −43.4 | ---- | 23 | 264 | −51.6 | ---- | 29 | 267 | −48.3 | ---- | 22 | 271 | −46.3 | ---- |
| 11,000 | 25 | 240 | −50.5 | ---- | 18 | 228 | −54.1 | ---- | 24 | 219 | −54.2 | ---- | 23 | 240 | −48.6 | ---- | 21 | 226 | −54.2 | ---- | 27 | 220 | −52.9 | ---- | 21 | 233 | −51.5 | ---- |
| 12,000 | 23 | 206 | −57.0 | ---- | 13 | 194 | −56.8 | ---- | 19 | 186 | −52.3 | ---- | 19 | 206 | −54.0 | ---- | 20 | 193 | −56.1 | ---- | 25 | 196 | −53.9 | ---- | 14 | 198 | −53.2 | ---- |
| 13,000 | 16 | 176 | −59.7 | ---- | 12 | 166 | −56.2 | ---- | 14 | 159 | −51.8 | ---- | 9 | 176 | −57.0 | ---- | 16 | 165 | −55.3 | ---- | 21 | 167 | −53.7 | ---- | 7 | 169 | −53.1 | ---- |
| 14,000 | 14 | 150 | −62.8 | ---- | | | | | 6 | 137 | −53.9 | ---- | | | | | 11 | 141 | −58.2 | ---- | 15 | 143 | −55.0 | ---- | | | | |
| 15,000 | 11 | 127 | −67.7 | ---- | | | | | | | | | | | | | 8 | 121 | −60.8 | ---- | 11 | 123 | −57.3 | ---- | | | | |
| 16,000 | 5 | 109 | −71.4 | ---- | | | | | | | | | | | | | | | | | | | | | | | | |

| Altitude (meters) m. s. l. | Ely, Nev. (1,508 m.) | | | | Glasgow, Mont. (648 m.) | | | | Grand Junction, Colo. (1,414 m.) | | | | Great Falls, Mont. (1,128 m.) | | | | Greensboro, N. C. (273 m.) | | | | Hatteras, N. C. (3 m.) | | | | Havana, Cuba [1] (51 m.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity |
| Surface | 31 | 804 | −2.5 | 79 | 31 | 934 | 0.9 | 69 | 30 | 854 | 5.8 | 52 | 30 | 881 | 2.6 | 52 | 30 | 986 | 12.0 | 75 | 31 | 1,019 | 12.3 | 86 | | | | |
| 500 | | | | | | | | | | | | | | | | | 30 | 960 | 13.0 | 65 | 31 | 961 | 13.8 | 66 | | | | |
| 1,000 | | | | | 31 | 894 | 1.7 | 60 | | | | | | | | | 30 | 904 | 10.8 | 63 | 31 | 905 | 11.8 | 57 | | | | |
| 1,500 | | | | | 31 | 840 | −0.9 | 57 | 30 | 846 | 5.6 | 51 | 30 | 841 | 1.4 | 46 | 30 | 851 | 7.7 | 67 | 30 | 853 | 9.4 | 54 | | | | |
| 2,000 | 31 | 796 | −1.3 | 72 | 31 | 788 | −3.8 | 57 | 30 | 795 | 2.7 | 51 | 30 | 790 | −2.4 | 50 | 30 | 801 | 5.0 | 68 | 29 | 802 | 6.6 | 49 | | | | |
| 2,500 | 31 | 747 | −3.2 | 64 | 31 | 740 | −7.0 | 60 | 30 | 747 | −1.2 | 56 | 30 | 741 | −6.2 | 58 | 30 | 753 | 2.5 | ---- | 29 | 755 | 4.2 | 39 | | | | |
| 3,000 | 31 | 701 | −6.9 | 70 | 31 | 693 | −9.8 | 61 | 30 | 701 | −5.2 | 63 | 30 | 695 | −9.3 | 63 | 30 | 708 | .3 | ---- | 29 | 709 | 1.7 | ---- | | | | |
| 4,000 | 31 | 616 | −12.8 | 59 | 31 | 609 | −15.2 | 58 | 29 | 617 | −12.4 | 66 | 30 | 610 | −15.2 | 63 | 30 | 624 | −4.6 | ---- | 29 | 626 | −3.3 | ---- | | | | |
| 5,000 | 31 | 539 | −19.4 | ---- | 31 | 532 | −21.2 | 53 | 29 | 540 | −19.2 | ---- | 30 | 534 | −21.2 | ---- | 29 | 549 | −10.9 | ---- | 29 | 551 | −9.3 | ---- | | | | |
| 6,000 | 31 | 471 | −27.1 | ---- | 29 | 464 | −28.2 | ---- | 29 | 471 | −26.1 | ---- | 30 | 465 | −28.3 | ---- | 28 | 481 | −17.5 | ---- | 28 | 483 | −16.0 | ---- | | | | |
| 7,000 | 31 | 408 | −34.8 | ---- | 28 | 403 | −35.6 | ---- | 29 | 409 | −33.1 | ---- | 30 | 404 | −35.9 | ---- | 27 | 421 | −24.6 | ---- | 28 | 422 | −23.4 | ---- | | | | |
| 8,000 | 30 | 354 | −42.5 | ---- | 28 | 348 | −42.9 | ---- | 27 | 354 | −40.6 | ---- | 30 | 349 | −43.3 | ---- | 25 | 365 | −32.2 | ---- | 28 | 368 | −31.0 | ---- | | | | |
| 9,000 | 29 | 304 | −49.4 | ---- | 26 | 299 | −49.6 | ---- | 25 | 306 | −46.8 | ---- | 30 | 300 | −49.8 | ---- | 24 | 316 | −39.1 | ---- | 28 | 318 | −38.7 | ---- | | | | |
| 10,000 | 27 | 261 | −54.4 | ---- | 24 | 256 | −53.9 | ---- | 25 | 263 | −51.8 | ---- | 27 | 257 | −54.9 | ---- | 22 | 273 | −46.2 | ---- | 28 | 275 | −46.4 | ---- | | | | |
| 11,000 | 23 | 224 | −57.7 | ---- | 21 | 220 | −55.5 | ---- | 23 | 225 | −53.9 | ---- | 24 | 220 | −57.4 | ---- | 21 | 234 | −52.1 | ---- | 27 | 235 | −53.2 | ---- | | | | |
| 12,000 | 22 | 191 | −59.1 | ---- | 18 | 188 | −54.0 | ---- | 19 | 192 | −54.3 | ---- | 19 | 187 | −54.5 | ---- | 18 | 200 | −55.9 | ---- | 22 | 201 | −56.8 | ---- | | | | |
| 13,000 | 18 | 163 | −58.1 | ---- | 15 | 161 | −52.6 | ---- | 14 | 165 | −54.1 | ---- | 16 | 160 | −52.8 | ---- | 16 | 171 | −57.8 | ---- | 19 | 173 | −58.5 | ---- | | | | |
| 14,000 | 13 | 139 | −58.1 | ---- | 11 | 138 | −51.9 | ---- | 13 | 142 | −55.4 | ---- | 11 | 137 | −51.2 | ---- | 12 | 145 | −59.9 | ---- | 14 | 147 | −60.5 | ---- | | | | |
| 15,000 | 6 | 119 | −58.7 | ---- | 9 | 118 | −51.6 | ---- | 8 | 121 | −56.6 | ---- | 9 | 117 | −50.4 | ---- | 8 | 124 | −61.6 | ---- | 5 | 126 | −64.6 | ---- | | | | |
| 16,000 | | | | | 6 | 102 | −51.9 | ---- | | | | | 6 | 100 | −51.7 | ---- | | | | | | | | | | | | |

See footnotes at end of table.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during March 1945*—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

| Altitude (meters) m. s. l. | Huntington, W. Va. (172 m.) | | | | International Falls, Minn. (343 m.) | | | | Jackson, Miss. (97 m.) | | | | Joliet, Ill. (178 m.) | | | | Lake Charles, La. (5 m.) | | | | Little Rock, Ark. (79 m.) | | | | Louisville, Ky. (165 m.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity |
| Surface | 31 | 997 | 10.2 | 77 | 31 | 969 | −0.7 | 75 | 31 | 1,005 | 16.5 | 77 | 31 | 993 | 7.1 | 81 | 29 | 1,015 | 18.7 | 84 | 31 | 1,006 | 14.3 | 79 | 31 | 997 | 11.8 | 71 |
| 500 | 31 | 959 | 12.2 | 65 | 31 | 950 | −0.4 | 72 | 31 | 958 | 15.9 | 70 | 31 | 955 | 8.7 | 68 | 29 | 958 | 17.3 | 71 | 31 | 957 | 14.2 | 69 | 31 | 958 | 12.5 | 62 |
| 1,000 | 31 | 903 | 9.8 | 64 | 31 | 893 | −2.2 | 69 | 31 | 903 | 13.6 | 63 | 31 | 898 | 6.6 | 67 | 29 | 904 | 15.8 | 59 | 31 | 902 | 12.1 | 66 | 31 | 902 | 9.6 | 63 |
| 1,500 | 31 | 850 | 6.5 | 64 | 31 | 838 | −3.3 | 66 | 31 | 851 | 11.7 | 57 | 31 | 845 | 4.7 | 58 | 29 | 852 | 13.3 | 62 | 31 | 849 | 9.7 | 59 | 31 | 850 | 7.3 | 58 |
| 2,000 | 31 | 799 | 3.6 | 65 | 31 | 786 | −5.3 | 64 | 31 | 802 | 9.6 | 49 | 31 | 794 | 2.7 | 47 | 29 | 802 | 10.9 | 56 | 31 | 799 | 7.4 | 53 | 31 | 799 | 4.7 | 55 |
| 2,500 | 31 | 752 | 1.0 | 51 | 31 | 738 | −7.6 | 63 | 31 | 755 | 7.4 | 42 | 31 | 747 | 0.5 | 46 | 29 | 756 | 8.6 | 45 | 31 | 752 | 5.1 | 48 | 31 | 751 | 2.4 | 47 |
| 3,000 | 31 | 706 | −0.9 | 42 | 31 | 691 | −9.8 | 56 | 31 | 710 | 4.6 | 41 | 31 | 701 | −2.4 | 44 | 29 | 711 | 6.4 | 35 | 31 | 707 | 2.5 | 44 | 31 | 706 | −0.1 | 42 |
| 4,000 | 31 | 622 | −5.8 | 44 | 31 | 607 | −15.3 | 55 | 30 | 627 | −1.1 | 37 | 31 | 618 | −8.6 | 48 | 29 | 629 | 0.6 | 30 | 29 | 624 | −3.4 | 37 | 31 | 623 | −5.3 | 38 |
| 5,000 | 31 | 547 | −12.2 | ---- | 31 | 531 | −21.4 | ---- | 29 | 553 | −7.6 | ---- | 29 | 542 | −15.2 | 44 | 29 | 554 | −6.5 | ---- | 29 | 549 | −9.9 | ---- | 31 | 547 | −11.4 | ---- |
| 6,000 | 31 | 479 | −18.6 | ---- | 31 | 463 | −28.1 | ---- | 29 | 485 | −14.4 | ---- | 28 | 474 | −21.8 | ---- | 28 | 487 | −13.6 | ---- | 29 | 482 | −17.2 | ---- | 31 | 480 | −18.0 | ---- |
| 7,000 | 30 | 418 | −25.6 | ---- | 29 | 402 | −35.2 | ---- | 29 | 424 | −21.9 | ---- | 28 | 413 | −28.7 | ---- | 28 | 426 | −20.8 | ---- | 29 | 421 | −24.8 | ---- | 31 | 419 | −24.8 | ---- |
| 8,000 | 30 | 363 | −32.8 | ---- | 29 | 347 | −42.4 | ---- | 28 | 369 | −29.4 | ---- | 24 | 358 | −36.2 | ---- | 27 | 372 | −28.4 | ---- | 27 | 366 | −32.4 | ---- | 28 | 364 | −32.4 | ---- |
| 9,000 | 30 | 314 | −40.2 | ---- | 29 | 299 | −48.6 | ---- | 28 | 320 | −36.8 | ---- | 22 | 310 | −42.3 | ---- | 26 | 322 | −35.6 | ---- | 27 | 316 | −39.3 | ---- | 25 | 316 | −39.7 | ---- |
| 10,000 | 30 | 271 | −47.4 | ---- | 27 | 256 | −52.6 | ---- | 28 | 277 | −44.1 | ---- | 20 | 266 | −49.2 | ---- | 24 | 279 | −43.2 | ---- | 26 | 274 | −46.2 | ---- | 24 | 272 | −47.4 | ---- |
| 11,000 | 30 | 233 | −53.5 | ---- | 23 | 220 | −54.1 | ---- | 27 | 238 | −50.9 | ---- | 16 | 228 | −54.4 | ---- | 23 | 240 | −50.4 | ---- | 26 | 235 | −53.1 | ---- | 23 | 234 | −53.9 | ---- |
| 12,000 | 27 | 199 | −56.6 | ---- | 18 | 188 | −52.7 | ---- | 26 | 203 | −55.5 | ---- | 11 | 195 | −53.9 | ---- | 19 | 205 | −55.5 | ---- | 26 | 201 | −56.4 | ---- | 23 | 200 | −57.0 | ---- |
| 13,000 | 21 | 169 | −56.9 | ---- | 11 | 160 | −50.1 | ---- | 23 | 174 | −57.6 | ---- | 11 | 167 | −54.5 | ---- | 15 | 176 | −59.6 | ---- | 24 | 171 | −58.6 | ---- | 19 | 170 | −58.3 | ---- |
| 14,000 | 17 | 145 | −59.4 | ---- | 8 | 138 | −50.8 | ---- | 20 | 148 | −60.0 | ---- | 8 | 142 | −56.9 | ---- | 9 | 150 | −62.9 | ---- | 21 | 146 | −60.8 | ---- | 14 | 146 | −59.8 | ---- |
| 15,000 | 13 | 124 | −62.7 | ---- | 5 | 118 | −51.3 | ---- | 13 | 126 | −63.5 | ---- | | | | | 5 | 127 | −66.3 | ---- | 16 | 124 | −64.0 | ---- | 8 | 124 | −62.1 | ---- |
| 16,000 | 8 | 105 | −63.3 | ---- | | | | | 8 | 107 | −67.1 | ---- | | | | | | | | | 8 | 105 | −66.4 | ---- | | | | |

| Altitude (meters) m. s. l. | Mazatlan, Mexico (80 m.) | | | | Medford, Oreg. (409 m.) | | | | Merida, Mexico (27 m.) | | | | Miami, Fla. (4 m.) | | | | Nashville, Tenn. (180 m.) | | | | North Platte, Nebr. (849 m.) | | | | Oakland, Calif. (2 m.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity |
| Surface | 31 | 1,005 | 18.8 | 82 | 28 | 968 | 7.1 | 74 | 27 | 1,010 | 27.6 | 58 | 31 | 1,020 | 21.3 | 80 | 31 | 996 | 14.4 | 70 | 30 | 912 | 4.6 | 64 | 31 | 1,017 | 11.0 | 73 |
| 500 | 31 | 957 | 21.2 | 38 | 28 | 958 | 6.8 | 72 | 27 | 957 | 24.4 | 58 | 31 | 963 | 19.5 | 77 | 31 | 958 | 13.1 | 64 | ---- | ---- | ---- | ---- | 31 | 958 | 7.7 | 70 |
| 1,000 | 31 | 904 | 20.6 | 28 | 28 | 901 | 3.4 | 76 | 27 | 904 | 21.3 | 62 | 31 | 909 | 16.6 | 68 | 31 | 903 | 10.9 | 60 | 30 | 895 | 6.1 | 55 | 31 | 902 | 4.6 | 67 |
| 1,500 | 31 | 853 | 18.4 | 26 | 28 | 847 | 0.0 | 83 | 27 | 854 | 18.0 | 63 | 31 | 857 | 14.7 | 50 | 31 | 851 | 8.4 | 58 | 30 | 842 | 5.0 | 49 | 31 | 847 | 1.9 | 60 |
| 2,000 | 31 | 804 | 15.3 | 23 | 28 | 795 | −3.4 | 87 | 27 | 804 | 15.1 | 57 | 31 | 807 | 13.0 | 38 | 31 | 800 | 5.9 | 54 | 30 | 791 | 2.5 | 48 | 31 | 796 | − .4 | 58 |
| 2,500 | 31 | 757 | 12.1 | 22 | 28 | 746 | −6.7 | 85 | 27 | 758 | 12.5 | 44 | 31 | 760 | 10.9 | ---- | 31 | 753 | 3.4 | 43 | 30 | 744 | − .4 | 46 | 31 | 748 | −3.1 | 53 |
| 3,000 | 31 | 713 | 8.8 | 24 | 28 | 700 | −9.1 | 78 | 27 | 714 | 10.5 | ---- | 31 | 716 | 8.6 | ---- | 31 | 707 | .9 | 42 | 30 | 698 | −4.2 | 49 | 31 | 701 | −5.9 | 50 |
| 4,000 | 29 | 631 | 2.3 | 29 | 28 | 614 | −14.3 | 66 | 27 | 633 | 4.3 | ---- | 31 | 634 | 2.4 | ---- | 30 | 624 | − 4.0 | ---- | 30 | 615 | −10.9 | 55 | 31 | 617 | −11.8 | 49 |
| 5,000 | 29 | 557 | −4.7 | ---- | 27 | 538 | −19.6 | 63 | 27 | 559 | −2.4 | ---- | 29 | 559 | −3.8 | ---- | 30 | 548 | −10.4 | ---- | 30 | 538 | −17.9 | ---- | 31 | 540 | −18.3 | 50 |
| 6,000 | 28 | 490 | −11.8 | ---- | 25 | 470 | −25.6 | ---- | 27 | 492 | −9.1 | ---- | 29 | 492 | −10.0 | ---- | 28 | 481 | −17.2 | ---- | 30 | 470 | −25.0 | ---- | 31 | 472 | −24.5 | ---- |
| 7,000 | 27 | 429 | −19.1 | ---- | 24 | 408 | −32.9 | ---- | 26 | 432 | −15.3 | ---- | 28 | 432 | −17.1 | ---- | 27 | 420 | −24.4 | ---- | 29 | 409 | −32.5 | ---- | 30 | 410 | −31.5 | ---- |
| 8,000 | 25 | 374 | −26.5 | ---- | 21 | 354 | −40.2 | ---- | 25 | 377 | −23.1 | ---- | 27 | 377 | −24.4 | ---- | 25 | 365 | −31.9 | ---- | 28 | 354 | −39.9 | ---- | 29 | 356 | −38.1 | ---- |
| 9,000 | 24 | 325 | −34.2 | ---- | 21 | 305 | −47.6 | ---- | 25 | 328 | −31.2 | ---- | 27 | 328 | −32.0 | ---- | 25 | 316 | −39.3 | ---- | 27 | 305 | −45.9 | ---- | 27 | 307 | −44.6 | ---- |
| 10,000 | 20 | 282 | −41.8 | ---- | 21 | 261 | −53.0 | ---- | 25 | 284 | −38.8 | ---- | 26 | 284 | −39.5 | ---- | 25 | 273 | −46.6 | ---- | 27 | 262 | −50.8 | ---- | 27 | 264 | −50.5 | ---- |
| 11,000 | 11 | 243 | −47.8 | ---- | 20 | 224 | −57.0 | ---- | 23 | 245 | −45.8 | ---- | 25 | 245 | −46.7 | ---- | 25 | 234 | −52.8 | ---- | 24 | 225 | −54.0 | ---- | 26 | 226 | −54.1 | ---- |
| 12,000 | ---- | ---- | ---- | ---- | 17 | 190 | −56.9 | ---- | 21 | 211 | −52.3 | ---- | 22 | 210 | −53.0 | ---- | 24 | 200 | −55.9 | ---- | 20 | 192 | −54.6 | ---- | 21 | 193 | −55.6 | ---- |
| 13,000 | ---- | ---- | ---- | ---- | 13 | 162 | −54.7 | ---- | 14 | 180 | −57.4 | ---- | 19 | 180 | −58.2 | ---- | 21 | 171 | −57.7 | ---- | 17 | 164 | −54.5 | ---- | 11 | 164 | −54.1 | ---- |
| 14,000 | ---- | ---- | ---- | ---- | 11 | 139 | −54.6 | ---- | 10 | 154 | −61.7 | ---- | 16 | 153 | −63.1 | ---- | 10 | 145 | −60.2 | ---- | 9 | 140 | −53.9 | ---- | 8 | 140 | −55.6 | ---- |
| 15,000 | ---- | ---- | ---- | ---- | 7 | 119 | −56.5 | ---- | 5 | 133 | −64.7 | ---- | 10 | 130 | −68.4 | ---- | 6 | 124 | −62.4 | ---- | 6 | 120 | −54.7 | ---- | ---- | ---- | ---- | ---- |
| 16,000 | ---- | ---- | ---- | ---- | 5 | 102 | −57.5 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 5 | 105 | −64.3 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| Altitude (meters) m. s. l. | Ogden, Utah (1,355 m.) | | | | Oklahoma City, Okla. (391 m.) | | | | Omaha, Nebr. (308 m.) | | | | Phoenix, Ariz. (339 m.) | | | | Pittsburgh, Pa. (382 m.) | | | | Portland, Maine (20 m.) | | | | Rapid City, S. Dak. (981 m.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity |
| Surface | 31 | 861 | 2.3 | 71 | 31 | 966 | 11.4 | 74 | 31 | 976 | 7.7 | 69 | 31 | 974 | 13.9 | 48 | 31 | 971 | 8.8 | 68 | 31 | 1,012 | 2.2 | 78 | 31 | 897 | 1.4 | 74 |
| 500 | ---- | ---- | ---- | ---- | 31 | 954 | 11.8 | 68 | 31 | 954 | 7.9 | 66 | 31 | 955 | 14.7 | 40 | 31 | 958 | 9.2 | 66 | 31 | 955 | 3.4 | 61 | ---- | ---- | ---- | ---- |
| 1,000 | ---- | ---- | ---- | ---- | 31 | 899 | 11.4 | 57 | 31 | 897 | 6.0 | 64 | 31 | 900 | 12.0 | 37 | 31 | 902 | 7.3 | 65 | 31 | 897 | 1.7 | 63 | 31 | 895 | 1.6 | 72 |
| 1,500 | 31 | 846 | 2.8 | 64 | 31 | 846 | 9.8 | 49 | 31 | 843 | 4.3 | 56 | 31 | 848 | 8.0 | 40 | 31 | 848 | 4.6 | 63 | 31 | 843 | −0.2 | 68 | 31 | 842 | 2.2 | 54 |
| 2,000 | 31 | 794 | −0.1 | 61 | 31 | 797 | 7.1 | 41 | 31 | 793 | 2.3 | 49 | 31 | 797 | 4.4 | 44 | 31 | 797 | 2.1 | 54 | 31 | 792 | −1.8 | 58 | 31 | 790 | −1.1 | 55 |
| 2,500 | 31 | 746 | −4.0 | 68 | 31 | 750 | 4.2 | 40 | 31 | 745 | −0.7 | 50 | 31 | 750 | 0.6 | 46 | 31 | 749 | −0.3 | 54 | 31 | 744 | −3.8 | 52 | 31 | 743 | −4.1 | 53 |
| 3,000 | 31 | 700 | −7.7 | 71 | 30 | 704 | 1.0 | 34 | 30 | 700 | −4.2 | 49 | 31 | 704 | −2.8 | 46 | 31 | 703 | −2.7 | 49 | 31 | 697 | −6.4 | 48 | 31 | 696 | −6.8 | 59 |
| 4,000 | 31 | 615 | −13.7 | 60 | 29 | 622 | −5.1 | ---- | 30 | 616 | −10.7 | 49 | 31 | 620 | −8.9 | 48 | 29 | 619 | −8.1 | 47 | 30 | 613 | −11.4 | 43 | 31 | 612 | −12.9 | 56 |
| 5,000 | 31 | 538 | −19.9 | ---- | 29 | 546 | −11.9 | ---- | 30 | 540 | −16.9 | 48 | 31 | 544 | −15.9 | 41 | 29 | 544 | −14.0 | 50 | 30 | 537 | −17.6 | ---- | 31 | 536 | −19.8 | 45 |
| 6,000 | 31 | 469 | −26.9 | ---- | 29 | 478 | −19.1 | ---- | 30 | 472 | −23.3 | ---- | 30 | 475 | −22.9 | ---- | 29 | 476 | −20.5 | ---- | 30 | 469 | −24.4 | ---- | 31 | 468 | −26.9 | ---- |
| 7,000 | 31 | 408 | −34.5 | ---- | 28 | 418 | −26.4 | ---- | 29 | 410 | −31.0 | ---- | 30 | 414 | −30.4 | ---- | 29 | 415 | −27.5 | ---- | 30 | 408 | −31.5 | ---- | 31 | 406 | −34.6 | ---- |
| 8,000 | 31 | 352 | −42.1 | ---- | 27 | 363 | −33.6 | ---- | 29 | 355 | −37.9 | ---- | 29 | 358 | −37.6 | ---- | 29 | 360 | −34.6 | ---- | 30 | 353 | −38.8 | ---- | 31 | 351 | −42.6 | ---- |
| 9,000 | 30 | 304 | −48.4 | ---- | 26 | 314 | −40.4 | ---- | 29 | 307 | −43.9 | ---- | 27 | 309 | −43.9 | ---- | 29 | 312 | −41.6 | ---- | 28 | 304 | −46.0 | ---- | 31 | 302 | −49.3 | ---- |
| 10,000 | 30 | 261 | −53.0 | ---- | 25 | 270 | −47.3 | ---- | 28 | 264 | −49.4 | ---- | 25 | 266 | −49.1 | ---- | 29 | 268 | −48.4 | ---- | 26 | 261 | −50.7 | ---- | 29 | 259 | −52.9 | ---- |
| 11,000 | 25 | 224 | −55.5 | ---- | 24 | 232 | −52.8 | ---- | 27 | 226 | −52.9 | ---- | 25 | 228 | −53.4 | ---- | 28 | 230 | −54.3 | ---- | 23 | 225 | −53.9 | ---- | 24 | 222 | −53.9 | ---- |
| 12,000 | 16 | 192 | −56.8 | ---- | 18 | 199 | −56.9 | ---- | 24 | 194 | −54.2 | ---- | 20 | 195 | −54.6 | ---- | 27 | 196 | −56.2 | ---- | 19 | 191 | −54.5 | ---- | 15 | 190 | −53.1 | ---- |
| 13,000 | 10 | 164 | −54.2 | ---- | 17 | 170 | −57.3 | ---- | 23 | 166 | −53.7 | ---- | 18 | 167 | −54.5 | ---- | 16 | 168 | −55.3 | ---- | 17 | 164 | −54.4 | ---- | 13 | 162 | −51.7 | ---- |
| 14,000 | 8 | 140 | −54.5 | ---- | 12 | 144 | −58.6 | ---- | 20 | 142 | −54.9 | ---- | 11 | 143 | −56.3 | ---- | 11 | 144 | −57.1 | ---- | 12 | 140 | −55.3 | ---- | 12 | 139 | −53.2 | ---- |
| 15,000 | 7 | 120 | −55.5 | ---- | 5 | 123 | −59.1 | ---- | 16 | 121 | −56.2 | ---- | 8 | 122 | −59.4 | ---- | 6 | 124 | −60.1 | ---- | 6 | 120 | −57.4 | ---- | 6 | 120 | −53.8 | ---- |
| 16,000 | ---- | ---- | ---- | ---- | 5 | 105 | −61.1 | ---- | 9 | 104 | −58.5 | ---- | 7 | 104 | −61.5 | ---- | ---- | ---- | ---- | ---- | 5 | 102 | −57.7 | ---- | ---- | ---- | ---- | ---- |
| 17,000 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 5 | 89 | −58.8 | ---- | 5 | 89 | −63.3 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

See footnotes at end of table.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during March 1945*—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

| Altitude (meters) m. s. l. | St. Louis, Mo. (171 m.) | | | | St. Paul, Minn. (225 m.) | | | | San Antonio, Tex. (240 m.) | | | | San Juan, P. R. (15 m.) | | | | Santa Maria, Calif. (71 m.) | | | | Sault Ste. Marie, Mich. (221 m.) | | | | Spokane, Wash. (598 m.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity |
| Surface | 30 | 994 | 11.2 | 71 | 30 | 984 | 4.2 | 76 | 28 | 985 | 19.3 | 72 | 31 | 1,016 | 23.7 | 75 | 31 | 1,009 | 9.5 | 82 | 28 | 987 | −0.6 | 84 | 31 | 942 | 3.3 | 78 |
| 500 | 30 | 956 | 11.0 | 62 | 30 | 952 | 4.2 | 71 | 28 | 955 | 19.2 | 67 | 31 | 961 | 20.0 | 77 | 31 | 958 | 8.5 | 74 | 28 | 954 | 1.6 | 73 | | | | |
| 1,000 | 30 | 900 | 8.9 | 58 | 30 | 895 | 2.5 | 63 | 28 | 902 | 16.8 | 65 | 31 | 907 | 16.3 | 75 | 31 | 901 | 5.9 | 69 | 28 | 896 | 1.4 | 58 | 31 | 896 | 1.7 | 70 |
| 1,500 | 30 | 847 | 6.8 | 52 | 30 | 841 | 0.9 | 59 | 28 | 850 | 14.2 | 61 | 31 | 855 | 13.0 | 72 | 31 | 848 | 3.1 | 63 | 28 | 842 | −1.0 | 58 | 31 | 842 | −1.8 | 74 |
| 2,000 | 30 | 797 | 4.6 | 47 | 30 | 790 | −1.6 | 56 | 28 | 801 | 12.3 | 50 | 31 | 805 | 11.4 | 50 | 31 | 797 | 0.8 | 57 | 28 | 790 | −3.1 | 58 | 31 | 790 | −5.3 | 80 |
| 2,500 | 30 | 749 | 2.4 | 46 | 30 | 742 | −4.0 | 52 | 28 | 755 | 10.3 | 34 | 31 | 759 | 10.5 | 31 | 30 | 749 | −1.4 | 48 | 28 | 742 | −5.6 | 60 | 31 | 741 | −8.5 | 78 |
| 3,000 | 30 | 704 | −0.3 | 44 | 30 | 696 | −6.7 | 47 | 28 | 710 | 7.6 | 26 | 31 | 714 | 8.7 | ---- | 30 | 703 | −4.1 | 45 | 28 | 695 | −8.1 | 53 | 31 | 694 | −11.2 | 74 |
| 4,000 | 30 | 620 | −6.2 | 41 | 30 | 611 | −12.8 | 53 | 28 | 628 | 0.6 | ---- | 30 | 632 | 3.2 | ---- | 29 | 619 | −10.0 | 39 | 28 | 611 | −12.9 | 47 | 31 | 609 | −16.4 | ---- |
| 5,000 | 28 | 545 | −13.0 | 44 | 30 | 536 | −19.1 | ---- | 28 | 554 | −6.3 | ---- | 30 | 558 | −3.1 | ---- | 28 | 542 | −16.2 | 42 | 28 | 535 | −19.6 | ---- | 31 | 532 | −22.5 | ---- |
| 6,000 | 27 | 477 | −19.9 | ---- | 30 | 467 | −26.3 | ---- | 28 | 485 | −13.6 | ---- | 30 | 491 | −9.8 | ---- | 28 | 474 | −23.4 | ---- | 28 | 467 | −26.4 | ---- | 31 | 464 | −28.9 | ---- |
| 7,000 | 26 | 416 | −27.3 | ---- | 30 | 406 | −33.9 | ---- | 28 | 426 | −21.1 | ---- | 30 | 431 | −17.1 | ---- | 28 | 412 | −30.5 | ---- | 28 | 406 | −33.8 | ---- | 31 | 402 | −35.8 | ---- |
| 8,000 | 25 | 362 | −34.1 | ---- | 27 | 351 | −41.4 | ---- | 28 | 371 | −28.5 | ---- | 30 | 376 | −24.3 | ---- | 26 | 357 | −37.5 | ---- | 28 | 350 | −40.7 | ---- | 31 | 348 | −43.2 | ---- |
| 9,000 | 25 | 313 | −41.4 | ---- | 27 | 302 | −47.7 | ---- | 28 | 322 | −36.2 | ---- | 29 | 327 | −31.3 | ---- | 24 | 309 | −44.0 | ---- | 24 | 303 | −46.9 | ---- | 31 | 299 | −50.1 | ---- |
| 10,000 | 25 | 269 | −48.8 | ---- | 26 | 260 | −52.2 | ---- | 28 | 278 | −43.8 | ---- | 29 | 284 | −38.2 | ---- | 22 | 266 | −50.4 | ---- | 20 | 261 | −51.7 | ---- | 29 | 256 | −55.3 | ---- |
| 11,000 | 23 | 231 | −55.1 | ---- | 25 | 223 | −54.6 | ---- | 28 | 239 | −50.8 | ---- | 29 | 245 | −45.4 | ---- | 19 | 228 | −55.9 | ---- | 17 | 225 | −54.7 | ---- | 24 | 219 | −56.2 | ---- |
| 12,000 | 21 | 197 | −56.6 | ---- | 24 | 190 | −55.1 | ---- | 27 | 205 | −56.3 | ---- | 27 | 210 | −52.0 | ---- | 18 | 195 | −58.2 | ---- | 16 | 193 | −55.1 | ---- | 20 | 188 | −54.8 | ---- |
| 13,000 | 16 | 168 | −56.2 | ---- | 19 | 163 | −53.4 | ---- | 25 | 174 | −58.8 | ---- | 27 | 179 | −58.6 | ---- | 12 | 166 | −56.5 | ---- | 14 | 165 | −53.3 | ---- | 17 | 160 | −52.6 | ---- |
| 14,000 | 8 | 144 | −56.1 | ---- | 13 | 140 | −54.2 | ---- | 21 | 148 | −61.2 | ---- | 25 | 153 | −64.4 | ---- | 11 | 142 | −57.4 | ---- | 13 | 141 | −54.3 | ---- | 14 | 138 | −53.2 | ---- |
| 15,000 | ---- | ---- | ---- | ---- | 8 | 120 | −55.3 | ---- | 14 | 126 | −65.3 | ---- | 22 | 130 | −69.6 | ---- | 6 | 120 | −57.8 | ---- | 9 | 121 | −55.9 | ---- | 11 | 118 | −52.6 | ---- |
| 16,000 | ---- | ---- | ---- | ---- | 8 | 103 | −56.5 | ---- | 8 | 106 | −68.9 | ---- | 9 | 110 | −75.1 | ---- | ---- | ---- | ---- | ---- | 5 | 103 | −57.2 | ---- | 7 | 101 | −53.0 | ---- |

| Altitude (meters) m. s. l. | Swan Island, W. I.[1] (10 m.) | | | | Tacubaya, Mexico (2,306 m.) | | | | Tampa, Fla.[2] (3 m.) | | | | Tatoosh Island, Wash. (31 m.) | | | | Toledo, Ohio (191 m.) | | | | Washington, D. C. (25 m.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity | Number of observations | Pressure | Temperature | Relative humidity |
| Surface | ---- | ---- | ---- | ---- | 31 | 773 | 17.9 | 41 | ---- | ---- | ---- | ---- | 31 | 1,007 | 6.2 | 83 | 31 | 993 | 6.5 | 82 | 31 | 1,014 | 11.7 | 67 |
| 500 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 31 | 951 | 2.9 | 80 | 31 | 956 | 8.2 | 70 | 31 | 959 | 11.2 | 56 |
| 1,000 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 31 | 894 | −0.4 | 78 | 31 | 900 | 6.2 | 66 | 31 | 903 | 8.9 | 57 |
| 1,500 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 31 | 840 | −3.7 | 80 | 31 | 846 | 3.9 | 59 | 31 | 849 | 6.0 | 59 |
| 2,000 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 31 | 788 | −6.8 | 76 | 31 | 795 | 1.7 | 53 | 31 | 798 | 3.6 | 58 |
| 2,500 | ---- | ---- | ---- | ---- | 31 | 755 | 16.7 | 40 | ---- | ---- | ---- | ---- | 31 | 739 | −9.5 | 69 | 31 | 748 | −0.4 | 50 | 31 | 751 | 0.8 | 54 |
| 3,000 | ---- | ---- | ---- | ---- | 31 | 712 | 13.1 | 42 | ---- | ---- | ---- | ---- | 31 | 692 | −12.2 | 67 | 31 | 702 | −2.9 | 49 | 30 | 705 | −1.5 | 44 |
| 4,000 | ---- | ---- | ---- | ---- | 31 | 632 | 5.0 | 52 | ---- | ---- | ---- | ---- | 31 | 607 | −17.4 | 62 | 30 | 618 | −8.5 | 47 | 30 | 621 | −6.6 | 37 |
| 5,000 | ---- | ---- | ---- | ---- | 31 | 558 | −2.9 | 55 | ---- | ---- | ---- | ---- | 30 | 530 | −23.7 | ---- | 29 | 542 | −15.1 | 46 | 30 | 546 | −12.7 | ---- |
| 6,000 | ---- | ---- | ---- | ---- | 30 | 491 | −9.6 | 46 | ---- | ---- | ---- | ---- | 29 | 462 | −30.3 | ---- | 29 | 474 | −21.8 | ---- | 30 | 478 | −19.4 | ---- |
| 7,000 | ---- | ---- | ---- | ---- | 29 | 431 | −16.2 | 44 | ---- | ---- | ---- | ---- | 29 | 400 | −37.1 | ---- | 28 | 414 | −28.3 | ---- | 30 | 417 | −26.2 | ---- |
| 8,000 | ---- | ---- | ---- | ---- | 29 | 376 | −23.4 | ---- | ---- | ---- | ---- | ---- | 27 | 345 | −44.6 | ---- | 27 | 359 | −35.1 | ---- | 30 | 363 | −33.4 | ---- |
| 9,000 | ---- | ---- | ---- | ---- | 29 | 327 | −31.4 | ---- | ---- | ---- | ---- | ---- | 23 | 296 | −50.5 | ---- | 27 | 310 | −41.9 | ---- | 30 | 314 | −40.6 | ---- |
| 10,000 | ---- | ---- | ---- | ---- | 29 | 284 | −39.0 | ---- | ---- | ---- | ---- | ---- | 19 | 254 | −53.8 | ---- | 26 | 267 | −48.8 | ---- | 28 | 271 | −47.5 | ---- |
| 11,000 | ---- | ---- | ---- | ---- | 29 | 245 | −46.7 | ---- | ---- | ---- | ---- | ---- | 14 | 218 | −53.4 | ---- | 26 | 229 | −54.5 | ---- | 26 | 232 | −53.4 | ---- |
| 12,000 | ---- | ---- | ---- | ---- | 19 | 210 | −54.2 | ---- | ---- | ---- | ---- | ---- | 9 | 186 | −51.5 | ---- | 25 | 196 | −56.3 | ---- | 23 | 198 | −56.4 | ---- |
| 13,000 | ---- | ---- | ---- | ---- | 9 | 180 | −59.0 | ---- | ---- | ---- | ---- | ---- | 9 | 155 | −50.7 | ---- | 19 | 168 | −55.6 | ---- | 17 | 169 | −57.6 | ---- |
| 14,000 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 7 | 137 | −51.6 | ---- | 13 | 144 | −57.2 | ---- | 12 | 144 | −59.8 | ---- |
| 15,000 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 8 | 122 | −58.9 | ---- | 5 | 123 | −63.0 | ---- |

[1] Data not yet received.
[2] Insufficient observations.

NOTE.—All observations scheduled between 10 p. m. and midnight, E. S. T. (0300 and 0500, G. C. T.), except at Mazatlan and Merida, where they are taken near 9 p. m., E. S. T. (0200, G. C. T.).

"Number of observations" refers to pressure only. (In a few cases temperature or humidity data may be missing for one or more levels of some observations.) Relative humidity data are not published for levels having a corresponding mean temperature below −20° C.

All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the values occurring below the operating range of the humidity element. For explanation of the adjustment see article entitled "Curve Method for Obtaining Monthly Means of Relative Humidity", p. 241, MONTHLY WEATHER REVIEW, December 1944.

None of the means included in these tables are based on less than 15 surface or 5 standard level observations.

TABLE 2.—*Free-air resultant winds based on pilot-balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.), during March 1945. Directions given in degrees from north* (N=360°, E=90°, S=180°, W=270°). *Velocities in meters per second*

| Altitude (meters) m. s. l. | Abilene, Tex. (534 m.) | | | Albuquerque, N. Mex. (1,630 m.) | | | Atlanta, Ga. (299 m.) | | | Billings, Mont. (1,095 m.) | | | Bismarck, N. Dak. (512 m.) | | | Boise, Idaho (868 m.) | | | Brownsville, Tex. (7 m.) | | | Buffalo, N. Y. (220 m.) | | | Burlington, Vt. (132 m.) | | | Charleston, S. C. (16 m.) | | | Cincinnati, Ohio (152 m.) | | | Denver, Colo. (1,627 m.) | | | El Paso, Tex. (1,196 m.) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 29 | 180 | 2.7 | 31 | 231 | 4.0 | 28 | 224 | 3.0 | 31 | 285 | 3.0 | 30 | 279 | 2.5 | 29 | 322 | 0.4 | 29 | 138 | 6.6 | 27 | 254 | 4.3 | 29 | 249 | 1.4 | 30 | 190 | 2.9 | 16 | 226 | 0.6 | 29 | 340 | 1.3 | 29 | 255 | 4.4 |
| 500 | | | | | | | 28 | 228 | 3.8 | | | | | | | | | | 29 | 152 | 8.0 | 27 | 256 | 6.6 | 29 | 235 | 4.2 | 30 | 209 | 5.1 | 16 | 215 | 3.1 | | | | | | |
| 1,000 | 29 | 200 | 5.2 | | | | 28 | 236 | 5.4 | | | | 30 | 281 | 3.9 | 29 | 316 | 0.8 | 19 | 179 | 7.8 | 25 | 249 | 8.2 | 27 | 258 | 6.6 | 28 | 234 | 6.8 | 16 | 229 | 5.9 | | | | | | |
| 1,500 | 28 | 214 | 6.2 | | | | 27 | 236 | 6.7 | 31 | 267 | 4.9 | 26 | 276 | 5.6 | 29 | 263 | 1.7 | 15 | 190 | 7.3 | 19 | 251 | 8.9 | 26 | 271 | 7.6 | 26 | 246 | 7.5 | 15 | 245 | 7.5 | | | | 29 | 248 | 4.9 |
| 2,000 | 25 | 230 | 8.0 | 31 | 241 | 5.0 | 26 | 243 | 7.6 | 30 | 278 | 5.9 | 23 | 272 | 6.7 | 28 | 250 | 3.9 | 13 | 218 | 5.4 | 19 | 258 | 10.4 | 21 | 288 | 12.5 | 25 | 255 | 8.8 | 13 | 248 | 9.7 | 29 | 337 | 1.0 | 29 | 254 | 5.1 |
| 2,500 | 22 | 240 | 10.1 | 31 | 242 | 5.9 | 21 | 251 | 8.3 | 28 | 267 | 7.6 | 21 | 272 | 9.2 | 28 | 254 | 4.9 | 13 | 220 | 5.7 | 18 | 266 | 11.5 | 18 | 294 | 13.4 | 23 | 263 | 9.0 | 10 | 253 | 11.4 | 29 | 237 | 0.9 | 28 | 254 | 6.3 |
| 3,000 | 20 | 243 | 13.4 | 29 | 246 | 7.4 | 18 | 249 | 9.9 | 24 | 270 | 9.1 | 20 | 271 | 10.2 | 23 | 263 | 6.0 | 12 | 225 | 7.3 | 16 | 269 | 13.0 | 14 | 297 | 14.6 | 23 | 257 | 10.3 | | | | 28 | 243 | 2.7 | 26 | 251 | 8.9 |
| 4,000 | 18 | 253 | 16.4 | 23 | 258 | 11.8 | 14 | 269 | 10.6 | 22 | 280 | 9.4 | 17 | 272 | 10.4 | 15 | 272 | 6.1 | 11 | 242 | 9.5 | 15 | 274 | 15.4 | 11 | 295 | 17.8 | 21 | 260 | 12.9 | | | | 27 | 253 | 6.8 | 22 | 244 | 15.2 |
| 5,000 | 16 | 253 | 20.6 | 20 | 260 | 17.0 | | | | 19 | 270 | 12.6 | 13 | 275 | 12.8 | | | | 10 | 248 | 10.9 | 11 | 262 | 17.1 | 10 | 285 | 21.4 | 15 | 257 | 12.1 | | | | 22 | 261 | 9.9 | 20 | 246 | 19.0 |
| 6,000 | 13 | 258 | 19.7 | 17 | 259 | 20.5 | | | | 16 | 263 | 11.0 | 12 | 285 | 15.2 | | | | 10 | 250 | 12.0 | | | | | | | 13 | 261 | 10.5 | | | | 20 | 261 | 12.1 | 12 | 245 | 21.5 |
| 8,000 | | | | 15 | 256 | 23.8 | | | | | | | 11 | 293 | 16.1 | | | | 10 | 249 | 19.0 | | | | | | | | | | | | | 11 | 261 | 18.3 | | | |
| 10,000 | | | | 10 | 261 | 23.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Altitude (meters) m. s. l. | Ely, Nev. (1,910 m.) | | | Grand Junction, Colo. (1,413 m.) | | | Greensboro, N. C. (271 m.) | | | Havre, Mont. (767 m.) | | | Jacksonville, Fla. (16 m.) | | | Joliet, Ill. (178 m.) | | | Las Vegas, Nev. (573 m.) | | | Little Rock, Ark. (88 m.) | | | Medford, Oreg. (410 m.) | | | Miami, Fla. (12 m.) | | | Mobile, Ala. (66 m.) | | | Nashville, Tenn. (194 m.) | | | New York, N. Y. (15 m.) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 31 | 217 | 1.3 | 31 | 278 | 2.0 | 29 | 230 | 3.9 | 30 | 281 | 3.1 | 31 | 116 | 3.0 | 28 | 211 | 4.8 | 31 | 206 | 1.4 | 27 | 169 | 1.8 | 20 | 269 | 1.0 | 31 | 129 | 4.4 | 28 | 182 | 3.5 | 30 | 211 | 2.9 | 29 | 221 | 2.4 |
| 500 | | | | | | | 29 | 227 | 5.3 | | | | 31 | 171 | 2.1 | 28 | 214 | 6.6 | | | | 27 | 188 | 4.0 | 30 | 267 | 0.9 | 31 | 133 | 5.7 | 28 | 185 | 4.2 | 30 | 208 | 5.1 | 29 | 249 | 6.0 |
| 1,000 | | | | | | | 29 | 220 | 6.6 | 30 | 276 | 5.9 | 31 | 224 | 3.7 | 26 | 218 | 6.6 | 31 | 210 | 2.1 | 22 | 203 | 5.0 | 30 | 223 | 2.1 | 31 | 134 | 3.9 | 21 | 229 | 3.7 | 29 | 219 | 6.7 | 29 | 262 | 8.3 |
| 1,500 | | | | 31 | 275 | 2.0 | 28 | 246 | 7.5 | 30 | 273 | 7.7 | 31 | 248 | 5.5 | 26 | 236 | 7.6 | 31 | 221 | 2.7 | 20 | 220 | 7.0 | 30 | 229 | 4.6 | 31 | 129 | 2.0 | 17 | 240 | 4.3 | 26 | 235 | 8.8 | 27 | 280 | 9.9 |
| 2,000 | 31 | 224 | 1.3 | 31 | 264 | 3.2 | 28 | 256 | 9.1 | 28 | 271 | 8.1 | 31 | 252 | 6.1 | 23 | 251 | 8.6 | 29 | 226 | 3.7 | 16 | 235 | 7.0 | 28 | 240 | 5.9 | 28 | 126 | 1.3 | 16 | 220 | 4.0 | 25 | 236 | 11.1 | 22 | 285 | 10.4 |
| 2,500 | 30 | 242 | 2.2 | 31 | 245 | 4.3 | 21 | 273 | 11.5 | 26 | 269 | 9.6 | 30 | 255 | 7.1 | 21 | 279 | 10.8 | 29 | 243 | 4.7 | 15 | 248 | 7.5 | 21 | 256 | 5.9 | 28 | 156 | 1.3 | 13 | 261 | 5.2 | 24 | 243 | 12.8 | 17 | 293 | 12.0 |
| 3,000 | 25 | 251 | 3.5 | 28 | 240 | 4.8 | 19 | 279 | 12.5 | 18 | 266 | 8.2 | 28 | 249 | 9.1 | 17 | 278 | 11.7 | 26 | 255 | 5.7 | 11 | 262 | 8.4 | 16 | 270 | 8.0 | 28 | 190 | 1.1 | 12 | 263 | 6.6 | 20 | 249 | 13.2 | 13 | 295 | 12.8 |
| 4,000 | 17 | 254 | 5.1 | 17 | 268 | 6.3 | 12 | 304 | 15.3 | 11 | 264 | 6.1 | 23 | 263 | 8.1 | | | | 24 | 272 | 8.5 | 10 | 272 | 11.2 | | | | 22 | 251 | 4.2 | 10 | 259 | 10.2 | 13 | 260 | 14.0 | | | |
| 5,000 | 16 | 265 | 8.8 | 10 | 305 | 7.6 | 12 | 299 | 16.1 | | | | 21 | 266 | 9.8 | | | | 21 | 283 | 9.7 | 10 | 265 | 12.9 | | | | 19 | 253 | 5.7 | | | | | | | | | |
| 6,000 | 16 | 274 | 10.8 | | | | 12 | 299 | 21.9 | | | | 17 | 268 | 9.6 | | | | 19 | 273 | 9.1 | | | | | | | 19 | 261 | 7.2 | | | | | | | | | |
| 8,000 | 14 | 275 | 13.0 | | | | | | | | | | 11 | 269 | 12.5 | | | | 12 | 291 | 14.2 | | | | | | | 13 | 273 | 9.6 | | | | | | | | | |
| 10,000 | 12 | 292 | 15.6 | | | | | | | | | | | | | | | | | | | | | | | | | 11 | 267 | 10.0 | | | | | | | | | |

| Altitude (meters) m. s. l. | Oakland, Calif. (8 m.) | | | Oklahoma City, Okla. (396 m.) | | | Omaha, Nebr. (306 m.) | | | Phoenix, Ariz. (338 m.) | | | Rapid City, S. Dak. (982 m.) | | | St. Louis, Mo. (181 m.) | | | St. Paul, Minn. (225 m.) | | | San Antonio, Tex. (240 m.) | | | San Diego, Calif. (15 m.) | | | Saulte Ste. Marie, Mich. (225 m.) | | | Seattle, Wash. (16 m.) | | | Spokane, Wash. (603 m.) | | | Washington, D. C. (24 m.) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity |
| Surface | 30 | 257 | 4.2 | 26 | 182 | 2.8 | 30 | 210 | 2.2 | 30 | 247 | 0.7 | 28 | 357 | 3.5 | 27 | 187 | 3.0 | 29 | 239 | 1.8 | 31 | 127 | 2.3 | 28 | 271 | 4.7 | 31 | 287 | 2.1 | 26 | 206 | 2.6 | 31 | 203 | 2.8 | 31 | 232 | 2.5 |
| 500 | 30 | 276 | 3.8 | 26 | 181 | 3.0 | 30 | 207 | 4.0 | 30 | 241 | 1.3 | | | | 27 | 198 | 4.0 | 29 | 224 | 2.8 | 31 | 130 | 3.6 | 27 | 278 | 4.4 | 31 | 256 | 1.9 | 26 | 207 | 3.3 | | | | 31 | 233 | 4.5 |
| 1,000 | 25 | 302 | 2.8 | 26 | 207 | 4.0 | 27 | 213 | 7.9 | 30 | 246 | 1.8 | 28 | 355 | 3.5 | 25 | 218 | 5.4 | 28 | 218 | 3.5 | 29 | 154 | 3.5 | 25 | 292 | 2.4 | 28 | 244 | 5.4 | 23 | 197 | 4.2 | 31 | 221 | 4.3 | 30 | 245 | 6.3 |
| 1,500 | 22 | 316 | 4.0 | 23 | 221 | 7.7 | 27 | 222 | 8.3 | 30 | 238 | 2.8 | 28 | 320 | 2.9 | 22 | 238 | 7.9 | 26 | 244 | 5.5 | 20 | 206 | 3.7 | 22 | 306 | 1.2 | 24 | 251 | 6.8 | 18 | 206 | 5.2 | 25 | 233 | 4.6 | 29 | 257 | 7.9 |
| 2,000 | 22 | 310 | 4.0 | 21 | 236 | 10.7 | 26 | 234 | 10.1 | 30 | 235 | 3.5 | 26 | 272 | 3.4 | 22 | 251 | 9.8 | 24 | 260 | 7.5 | 17 | 226 | 7.2 | 20 | 309 | 2.2 | 24 | 260 | 8.5 | 13 | 221 | 4.0 | 18 | 251 | 5.1 | 27 | 267 | 11.1 |
| 2,500 | 22 | 307 | 5.7 | 20 | 233 | 12.6 | 22 | 255 | 10.0 | 30 | 251 | 4.7 | 23 | 265 | 5.5 | 22 | 257 | 12.5 | 21 | 266 | 8.3 | 15 | 236 | 9.3 | 19 | 322 | 4.1 | 20 | 271 | 10.5 | | | | 11 | 267 | 5.5 | 24 | 268 | 12.8 |
| 3,000 | 21 | 324 | 7.6 | 17 | 239 | 16.0 | 22 | 258 | 12.5 | 29 | 258 | 7.0 | 20 | 267 | 8.6 | 20 | 261 | 14.3 | 19 | 262 | 9.3 | 14 | 240 | 10.1 | 18 | 325 | 5.5 | 19 | 280 | 12.0 | | | | 10 | 274 | 4.6 | 24 | 273 | 14.4 |
| 4,000 | 19 | 310 | 9.4 | 16 | 248 | 19.3 | 21 | 255 | 15.8 | 24 | 258 | 9.2 | 18 | 273 | 11.7 | 15 | 286 | 13.6 | 15 | 277 | 13.8 | 13 | 241 | 14.2 | 16 | 321 | 6.8 | 12 | 286 | 16.5 | | | | | | | 21 | 276 | 16.4 |
| 5,000 | 15 | 304 | 12.2 | 12 | 263 | 17.1 | 19 | 262 | 19.2 | 19 | 261 | 13.5 | 15 | 278 | 13.8 | 14 | 290 | 17.7 | 13 | 289 | 16.0 | 13 | 248 | 19.1 | 15 | 301 | 9.6 | | | | | | | | | | 17 | 279 | 16.3 |
| 6,000 | 15 | 311 | 14.0 | 12 | 261 | 20.1 | 17 | 266 | 20.8 | 19 | 256 | 16.4 | 14 | 285 | 15.6 | 11 | 286 | 17.8 | 13 | 286 | 18.8 | 11 | 258 | 20.6 | 14 | 304 | 12.6 | | | | | | | | | | 14 | 273 | 17.5 |
| 8,000 | 11 | 309 | 16.8 | | | | 10 | 266 | 25.1 | 14 | 266 | 18.7 | 10 | 296 | 16.8 | | | | | | | | | | 13 | 300 | 17.0 | | | | | | | | | | | | |
| 10,000 | 10 | 307 | 21.9 | | | | | | | | | | | | | | | | | | | | | | 11 | 288 | 20.6 | | | | | | | | | | | | |

TABLE 3.—*Maximum free air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during March 1945*

| Section | Surface to 2,500 meters (m. s. l.) | | | | | Above 2,500 to 5,000 meters (m. s. l.) | | | | | Above 5,000 meters (m. s. l.) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Maximum velocity | Direction | Altitude (m.) m. s. l. | Date | Station | Maximum velocity | Direction | Altitude (m.) m. s. l. | Date | Station | Maximum velocity | Direction | Altitude (m.) m. s. l. | Date | Station |
| Northeast [1] | 44.6 | N. | 2,277 | 24 | Portland, Maine | 48.5 | W. | 5,000 | 18 | Burlington, Vt | 82.5 | W. | 10,162 | 18 | Portland, Maine. |
| East-Central [2] | 45.9 | WSW. | 2,010 | 6 | Knoxville, Tenn | 48.2 | SW. | 4,412 | 21 | Hatteras, N. C | 72.0 | W. | 6,026 | 7 | Greensboro, N. C. |
| | | | | | | | | 4,691 | | | | | | | |
| Southeast [3] | 34.0 | WSW. | 2,186 | 6 | Charleston, S. C | 46.5 | SW. | 4,961 | 21 | Charleston, S. C | 53.0 | WSW. | 11,793 | 24 | Birmingham, Ala. |
| North-Central [4] | 46.4 | WSW. | 2,262 | 28 | Alpena, Mich | 46.5 | W. | 4,992 | 2 | Marquette, Mich | 58.0 | W. | 5,712 | 2 | Marquette, Mich. |
| | | | | | | | | | | | | | 5,205 | | |
| Central [5] | 45.0 | SW. | 2,385 | 1 | Dodge City, Kans | 56.2 | WNW. | 5,000 | 6 | Dodge City, Kans | 64.6 | WNW. | 5,475 | 6 | Dodge City, Kans. |
| South-Central [6] | 47.8 | SW. | 1,916 | 28 | Tulsa, Okla | 49.3 | SW. | 4,631 | 5 | Big Spring, Tex | 63.0 | WSW. | 11,159 | 3 | Waco, Tex. |
| Northwest [7] | 42.5 | W. | 2,477 | 10 | Havre, Mont | 50.0 | NNW. | 5,000 | 28 | Ellensburg, Wash | 66.0 | WNW. | 7,279 | 31 | Burns, Oreg. |
| West-Central [8] | 36.2 | SSW. | 2,350 | 17 | Elko, Nev | 48.8 | NNE. | 4,676 | 29 | Reno, Nev | 80.0 | NW. | 8,362 | 23 | Oakland, Calif. |
| Southwest [9] | 34.8 | WNW. | 2,368 | 25 | El Paso, Tex | 51.0 | WSW. | 5,000 | 27 | Raton, N. Mex | 93.0 | W. | 9,310 | 26 | Albuquerque, N.Mex. |

[1] Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and northern Ohio.
[2] Delaware, Maryland, Virginia, West Virginia, southern Ohio, Kentucky, eastern Tennessee, and North Carolina.
[3] South Carolina, Georgia, Florida, and Alabama.
[4] Michigan, Wisconsin, Minnesota, North Dakota, and South Dakota.
[5] Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.
[6] Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.
[7] Montana, Idaho, Washington, and Oregon.
[8] Wyoming, Colorado, Utah, northern Nevada, and northern California.
[9] Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.

## RIVER STAGES AND FLOODS

By C. R. JORDAN

Precipitation during March averaged well above normal over most of the United States, being especially heavy over the Mississippi and Ohio River Valleys. Unusually dry weather prevailed in the Eastern and Southeastern States and in the western Great Plains.

The most noteworthy hydrologic feature of the month was the Ohio River flood which, while not record-breaking, was generally second in magnitude (except for an earlier flood in 1884) to the flood of January 1937, the greatest flood of record in a large reach of the river. An early thaw and break-up in the upper Mississippi and Missouri Basins raised the Mississippi River and numerous tributaries to flood stages. These floods were combined at Cairo, Ill., and were joined later in the month by floods from excessive rainfalls over the Arkansas and Red River Basins to produce floods in the lower Mississippi River, the stages in Louisiana exceeding by mid-April those reached in the flood of 1937. There was some overflow at scattered points throughout Pennsylvania, New York, and New England; and rather extensive flooding in the west South-central States.

*Hudson Bay Drainage.*—A flood of limited extent, due almost entirely to snow-melt, occurred in the Red River of the North during the latter part of March and early April. The river reached a crest of 26.6 feet, 9.6 feet above flood stage, at Fargo, N. Dak., on the 18th. Damage caused by the flood was reported as $18,827.

*Lake Erie Drainage.*—The St. Marys River at Decatur, Ind., and the Maumee River at Fort Wayne, Ind., rose rapidly on March 31, and passed flood stage on March 31 and April 1, respectively. The floods continued into April.

March 1945, was the wettest month of record in Ohio. At Columbus it was the wettest March since 1913 and the wettest of all months in the last 32 years, with the single exception of January 1937. Heaviest rains fell on the 2d, 6th, and from the 19th to 21st. Flood stage was exceeded slightly at Upper Sandusky, Ohio, on the 7th and from the 20th to 21st, but no important damage was reported.

*Atlantic Slope Drainage.*—The unusually heavy snow cover that accumulated in Pennsylvania, New York, and New England during the winter of 1944–45, featured in earlier issues of the REVIEW, and the usually troublesome ice in the rivers was melted away in progressive stages during the 5-week period beginning about February 21 and discharged to the sea without serious overflow. It must be conceded that "Mother Nature" behaved exceedingly well this season. Less than normal and well distributed precipitation during the month with occasional cold weather that slowed down the rate of run-off from snow-melt were important factors in preventing serious overflow.

Only minor flooding of lowlands along the rivers occurred at scattered points throughout New England, New York, and Pennsylvania, and little or no damage resulted. The following summary of the melting of snow and ice and resulting overflow in the Connecticut River Basin was received from the Official in Charge, Weather Bureau Office, Hartford, Conn.:

> In general, only minor flooding developed in lowland areas, where the main river exceeded bankful stages several times during the last half of the month. Flood conditions were due almost entirely to run-off from the heavy snow cover which had accumulated during the winter. Above normal temperatures began late in February and continued throughout the first half of March to produce a steadily increasing flow in tributaries and the main river.
>
> Flood stages did not develop, however, until an extremely warm trend began on March 15 which was not checked until March 22. During these 7 days the temperature averaged 17.4 degrees above normal at Hartford, with an extreme temperature of 81° occurring on March 20. Fortunately, a cold air mass enveloped the northern half of Vermont and New Hampshire during this period and prevented rapid run-off from this area still covered by heavy snow. The first freshet produced during this period of high temperatures exceeded flood stage only slightly, 0.2 foot, at South Newbury, Vt., on March 20–21 and 2.3 feet at Hartford, Conn., on March 21. Another flood wave developed a few days later in connection with about an inch of rain which fell March 21–22 to augment the rapid snow-melt of the 20th. This second rise came before the first could subside, and flood stage was just equalled at White River Junction, Vt., on March 22 and was exceeded by 1.6 feet at Montague City, Mass. on March 22 and by 4.9 feet at Hartford on March 23. The third wave during the month occurred when record-breaking March temperatures developed on March 28–30 reaching this time into the extreme northern portion of the basin. This third wave of high water exceeded flood stage 3.5 feet at South Newbury on March 31 and caused a rise of about 5 feet at White River Junction to 0.1 foot above flood stage on April 1 and a rise at Hartford of about 3 feet to 1.5 feet above flood stage on March 31.
>
> River ice melted away or broke up early with moderate rises of the tributaries and main river in such manner as to prevent serious ice jams when the higher freshets occurred later in the month. Ice was out of the river below Montague City on March 15, and it had broken away at Walpole, N. H., on March 13, and at South Newbury on March 31 and at North Stratford, N. H., on March 15.
>
> Considering the critical flood potentialities in the heavy snow cover which blanketed the entire basin on March 1 and the subsequent record-breaking warm weather, it is remarkable that so much water could be released in 1 month without causing damaging floods. Less than normal precipitation well distributed during the month, together with occasional cool weather which slowed down the rate of snow-melt at times, were factors which aided materially in preventing higher river stages.

There were four rises in the Susquehanna River during March that approached or exceeded flood stage in the upper basin, but at and below Towanda, Pa., flood stage was exceeded only at Towanda where the stage reached 0.2 foot above bankful on March 4.

The month was unusually dry in the Southeastern States and the only overflow reported was at a few points in Virginia and South Carolina during the early part of the month and were, for the most part, run-off from rainfall during the closing days of February.

*East Gulf of Mexico Drainage.*—The Tombigbee River from Gainesville southward remained above flood stage on March 1 from the February rains, and additional rain during March resulted in above flood stages on the Black Warrior and upper Tombigbee Rivers during the first week of March and maintained above bankful stages below Demopolis, Ala., on the Tombigbee River through the end of March. No damage was reported from any of the rises during March, but the continued overflow of the lower river will delay planting and prevent lumbering operations.

Pearl River was considerably above flood stage at most stations at the beginning of the month. Several moderate to heavy rains during the month caused only slight rises in most instances since the rivers were already high, but the rains were frequent and heavy enough to keep the stages well above flood stage the entire month. Damage was reported along the entire length of the Pearl River System with the most severe damage occurring in the Jackson, Miss., area. Several sections of Jackson were flooded, causing some industries to suspend work for several days. Many bridges were destroyed or badly damaged. Loss during the flood of the last half of February and March 1945, including the suspension of business, amounted to about $190,000.

### MISSISSIPPI SYSTEM

*Upper Mississippi and Missouri Basins.*—Temperatures considerably above normal throughout the Upper Mississippi and Missouri River Basins caused an early spring break-up. The rapid thawing of the snow combined with above normal precipitation, except in southwestern South Dakota and western Nebraska, produced extremely heavy run-off. Ice was unusually heavy in many streams, particularly in the Missouri River Basin, and local flooding resulted from backwater from ice gorges that formed during the break-up. Ice was heavy in the Knife and Heart River Valleys, causing ice jams and heavy local flooding. The most serious damage occurred along the highway between Bismarck and Mandan, N. Dak., because the ice and water could not get into the frozen Missouri River. The highway and adjacent bottom lands were completely covered with cakes of ice from 1 to nearly 3 feet in thickness. The highway was covered with about 4 feet of water from March 13 through March 18 and was opened for traffic on the 19th. Property damage along the Heart River amounted to about $60,000.

An ice gorge also developed on the main Missouri River at what is known as Michaelsen Bend about 5 miles below Blair, Nebr., causing a rise at Blair on the 12th. A stage of 19.25 feet, believed to be approximately the crest, was reached about noon. By 6 p. m. the river had fallen to a stage of 17.2 feet.

Flood stages were experienced in many of the Mississippi and Missouri River tributaries in Minnesota, Wisconsin, North and South Dakota, Iowa, Nebraska, Kansas, Missouri, and Illinois, as shown by the table at the end of this report. Flood stages were also exceeded on the Mississippi River from Minneapolis, Minn., downstream and on the Missouri River at and below Waverly, Mo.

Damage from these overflows was comparatively light since they occurred well in advance of the crop season, in contrast to the floods of May and June 1944. There was some damage to bridges, highways, fences, railroads, etc., mainly from ice action, but aggravated by rapidly rising water.

### THE OHIO RIVER FLOOD OF MARCH 1945

At the great industrial center of Pittsburgh, Pa., the waters of the Allegheny and Monongahela Rivers join to form the Ohio River, one of America's most picturesque streams and a very important inland waterway. From Pittsburgh, the Ohio River flows in a general southwesterly direction to its confluence with the Mississippi at Cairo, Ill., a distance of 981 miles, through a relatively narrow valley with a gentle slope throughout its length, except in the vicinity of Louisville, Ky., where there is a fall of 26 feet in 3 miles. The average fall of the river is about 0.4 foot per mile. The river is controlled at low stages by navigation improvements of the U. S. Engineers and never goes below the 9-foot navigation stage, but at appreciably higher stages the navigation dams are lowered, allowing the water to flow freely.

The Ohio Basin, embracing parts of 14 States, is a densely populated region, one of the principal industrially developed areas in the United States. It is also noted for its rich agricultural lands. Because of the large and extensively developed coal fields in the basin, the outstanding development has been the iron and steel industry centered at Pittsburgh, and extending up the Monongahela and down the Ohio. Cincinnati, Louisville, and Wheeling are only a few of the other centers of industry on the river. Railroads, highways, and other public developments, as well as industries and private improvements, have been located along the river, largely through necessity, and many are susceptible to flooding. However, flood protective works built along the river front at many points in recent years serve to reduce the damage from floods.

The Ohio Basin receives a greater annual precipitation (an average of 44 inches) than any other major subdivision of the Mississippi System, except the Lower Alluvial Valley of the Mississippi. The annual amount varies from 80 inches in portions of the southern Appalachians to 35 inches in the northwestern section of the basin. Flood stage is reached or exceeded at some point along the Ohio practically every year. Damaging floods which have exceeded flood stage by 5 feet or more over considerable stretches of the river have occurred about 30 times in the last 64 years. Property damage from floods ranks higher in the Ohio Basin than in any other major river basin in the country. For the 30-year period from 1924 to 1943, inclusive, the property loss from floods in the Ohio Basin amounted to approximately $670,000,000 with loss of life of 472 persons. Of the property damage, more than $400,000,000 occurred in the flood of 1937 alone. (See MONTHLY WEATHER REVIEW SUPPLEMENT No. 37, the Ohio and Mississippi River Floods of January-February 1937, by Bennett Swenson, for a report of this flood.) Other outstanding floods during the last 64 years occurred in 1936, 1913, 1907, 1884, and 1883.

The Ohio River normally shows a rise in stage during the winter months, reaching a peak in March and falling steadily to the lowest point during the summer months. The past 12-month period was no exception to this rule; in fact, it was an extreme example. Most of the Ohio Basin suffered from a serious drought after May 1944, resulting in relatively low river stages. A series of heavy rains from the second week of February to March 7 over most of the Ohio River Basin, aided to some extent by snow-melt in northern sections, produced a major flood in the Ohio River during March. Rapidly rising flood waters resulted in loss of life and heavy damage by flooding of large areas of low farmlands, by closing of coal mines and many industrial plants manufacturing essential war

TABLE I.—*Snowfall in Upper Ohio Basin, 1944–45*

| Station | Inches | | | | |
|---|---|---|---|---|---|
| | December | January | February | March | Total |
| Port Allegany, Pa. | 20.0 | 18.0 | 10.0 | 12.0 | 60.0 |
| Olean, N. Y. | 29.0 | 20.0 | 10.3 | 14.8 | 74.1 |
| Warren, Pa. | 33.5 | 18.5 | 11.5 | 2.0 | 65.5 |
| Meadville, Pa. | 47.3 | 27.2 | 15.5 | 5.5 | 95.5 |
| Franklin, Pa. | 37.0 | 20.0 | 10.5 | 5.5 | 73.0 |
| Glen Hazel (nr.), Pa. | 30.8 | 22.0 | 11.3 | 6.5 | 70.6 |
| Ridgway, Pa. | 30.0 | 19.5 | 10.0 | 3.0 | 62.5 |
| Clarion, Pa. (Piney) | 35.2 | 17.0 | 8.3 | 4.5 | 65.0 |
| Parkers Landing, Pa. | 28.0 | 18.0 | 3.0 | 1.0 | 50.0 |
| DuBois, Pa. | 40.0 | 25.4 | 11.8 | 3.5 | 80.7 |
| Punxsutawney, Pa. | 25.4 | 27.7 | 10.0 | 2.4 | 65.5 |
| Mosgrove, Pa. | 24.5 | 14.8 | 4.3 | T | 43.6 |
| Hooversville, Pa. | 37.7 | 25.4 | 9.3 | 1.5 | 73.9 |
| Ebensburg, Pa. | 28.1 | 16.0 | 4.6 | 1.3 | 50.0 |
| Seward, Pa. | 31.0 | 28.0 | 6.0 | 3.0 | 68.0 |
| Blairsville, Pa. | 38.3 | 31.4 | 9.9 | 4.5 | 84.1 |
| Boswell (nr.), Pa. | 53.0 | 52.0 | 19.0 | 8.0 | 132.0 |
| Latrobe, Pa. | 27.0 | 17.3 | 5.2 | T | 49.5 |
| Saltsburg, Pa. | 30.5 | 27.0 | 6.0 | T | 63.5 |
| Vandergrift, Pa. | 23.0 | 13.4 | 3.8 | T | 40.2 |
| Schenley, Pa. | 26.8 | 15.0 | 3.1 | T | 44.9 |
| Natrona, Pa. | 27.5 | 22.1 | 4.3 | T | 53.9 |
| Lake Lynn, Pa. | 14.0 | 11.5 | 2.2 | 4.0 | 31.7 |
| Greensboro, Pa. | 20.2 | 17.6 | 7.2 | 0.8 | 51.8 |
| Meyersdale, Pa. | 37.5 | 21.0 | 10.0 | 3.0 | 71.5 |
| Confluence, Pa. | 27.0 | 14.2 | 7.8 | 1.0 | 50.0 |
| Sutersville, Pa. | 26.0 | 14.5 | 4.5 | T | 45.0 |
| McKeesport, Pa. | 21.5 | 14.5 | 2.5 | T | 38.5 |
| Bruceton, Pa. | 23.7 | 19.9 | 5.7 | 2.0 | 51.3 |
| Pittsburgh, Pa. | 26.0 | 19.2 | 3.8 | T | 49.0 |
| Beaver Falls, Pa. | 20.5 | 15.2 | 2.5 | 1.0 | 39.2 |
| Midland, Pa. | 24.0 | 17.3 | 2.5 | 4.0 | 47.8 |
| Claysville, Pa. | 27.8 | 16.7 | 4.0 | 1.0 | 49.5 |
| Somerset, Pa. | 39.1 | 16.0 | 11.0 | 3.0 | 69.1 |

materials, and by disrupting transportation and flooding of many homes. According to records of the American Red Cross, 24 lives were lost as a result of the flood.

Large accumulations of snow were present during January in western Pennsylvania and western New York with heavy ice in many of the streams, particularly in the Allegheny River. The snow cover by early February was as great as and in some places exceeded the accumulations that prevailed prior to the disastrous flood of March 1936. Table I gives a record of the snowfall for the season December 1, 1944, to March 31, 1945, at selected stations in the upper Ohio Basin.

Fortunately, the sequence of weather events beginning in mid-February of this year, which included short periods of mild weather and moderate rainfall followed by freezing weather, allowed the Allegheny and Monongahela Rivers to disgorge much of the melted snow without excessive damage. The alternate periods of mild-rainy and cold weather show clearly on the hydrograph of the river stage at Pittsburgh, Pa., which shows no less than five crests between February 23 and March 7.

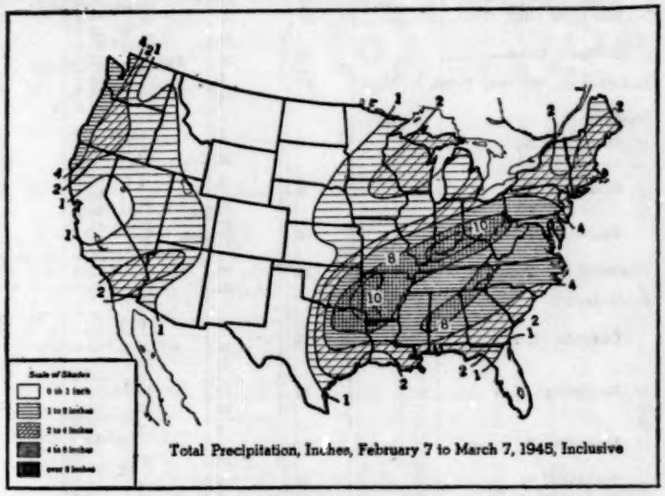



FIGURE 1.—Chart of flood-producing rain.

The rise in the Ohio River began in mid-February as a result of heavy rains in the Ohio Basin. As heavy rains continued intermittently, the river rose steadily, exceeding the established flood stage of 40 feet at the mouth of the Ohio River at Cairo, Ill., on February 23. Two days later the river reached flood stage at Evansville, Ind., and on the 27th and 28th the flood level was exceeded at Cincinnati, Ohio, and at Pittsburgh, Pa. By the 4th and 5th of March the entire Ohio River was in flood. On March 5–6, the final rainstorm of the series occurred immediately along the entire Ohio River, causing the river to rise sharply. Total rainfall during the period February 7 to March 7 exceeded 8 inches over a wide belt, centering over the main stem of the Ohio River and extending from Cairo, Ill., to Pittsburgh, Pa. The total rainfall for this period is shown graphically by figure 1. For additional precipitation data, the reader is referred to the HYDROLOGIC BULLETINS and CLIMATOLOGICAL DATA that are published monthly by the Weather Bureau.

The following summary of the flood in the Cincinnati district was prepared by George R. Marth, river forecaster of the Cincinnati Weather Bureau Office:

> The February–March 1945 Ohio River Flood in the Cincinnati district was caused by the frequent heavy rains from February 13 to March 7. Total rainfall over this district during that period ranged from 5 to 11 inches, with the heaviest (10 to 11 inches) being centered along the Ohio River and lower reaches of the tributaries, decreasing to near 5 inches over the tributary headwaters, except locally over the Kentucky River. Toward the close of February, the Ohio River throughout this district had risen to within 10 feet of flood stage as a result of moderately heavy and well distributed rains since February 13. Three closely spaced storms followed on February 25–26, March 2–3 and 5–6, each producing heavy to excessive rainfall along the Ohio River, the over-all total averaging 7–8 inches. Each of these storms caused a distinct rise to a higher crest and the flooded river had little or no opportunity to run out before the succeeding storm moved into the valley. As a result, stages rose to heights which finally crested as the fourth highest flood of record, being exceeded only by the floods of March–April 1913, February 1884, and January 1937. No rainfall of consequence occurred from March 7 to 18 and the Ohio River in this district fell below flood stage on March 14–16.
>
> In addition to the Ohio River, the following tributaries in this district were in flood as indicated: Licking River at Falmouth and below: Kentucky River at Frankfort and below (also at Jackson on the North Fork); Little Miami River; the extreme lower reach of the Great Maimi River; and all creeks including a severe "flash flood" on Mill Creek in the industrial area of Cincinnati.
>
> An unusual feature of this flood is revealed in the fact that although a major flood developed on the Ohio River, no extremely high stages occurred on the larger tributaries, flooding on these streams being confined to the lower reaches. Another interesting feature in the Cincinnati district was the similarity to the January 1937 flood in the final cresting. At and below Dam 35 the river crested without any effect from the upper Ohio, and nearly 2 days before crests occurred above Dam 35 to Portsmouth. The heavier rain over the lower reach of the district resulted in rapid run-off and unusually high stages compared to the upper portion. This provided for considerable storage in the reach above Dam 35, where the rise from the upper Ohio was absorbed. Final crests in that reach were thus delayed about 2 days by the normal lag in travel time on the upper Ohio River.
>
> The discharge of the Ohio River at Cincinnati at the time of crest was approximately 690,000 c. f. s.

The flood was relatively more severe on the main stream than on the tributaries, none of which were reported in extreme flood. The flood peaks on the Ohio were several feet below the maximum flood of record, but they rank generally among the first four or five of the greatest floods. At Parkersburg, W. Va., the crest was the seventh highest of record, while at Louisville, Ky., the crest was exceeded only by the flood of 1937. A comparison of this flood at a number of points with other floods of recent years is shown by table II.

TABLE II.—*Comparison of Ohio River Floods*

| Station | Flood stage | 1913 | | 1936 | | 1937 | | 1942-43 | | 1945 | | Highest of record | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Stage | Date | Stage | Date | Stage | Date | Stage | Date | Stage* | Date | Stage | Year |
| Pittsburgh, Pa. | 25 | 34.5 | Jan. 9 | 46.0 | Mar. 18 | 34.5 | Jan. 26 | 36.6 | Dec. 31 | 33.4 | Mar. 7 | 46.0 | 1936 |
| Wheeling, W. Va. | 36 | 51.1 | Mar. 28 | 55.2 | Mar. 19 | 48.7 | Jan. 26 | 51.5 | Dec. 31 | 47.3 | Mar. 8 | 55.2 | 1936 |
| Parkersburg, W. Va. | 36 | 58.9 | Mar. 29 | 48.0 | Mar. 20 | 55.4 | Jan. 26 | 49.0 | Jan. 1 | 48.5 | Mar. 9 | 58.9 | 1913 |
| Point Pleasant, W. Va. | 40 | 62.8 | Mar. 30 | 54.4 | Mar. 22 | 62.7 | Jan. 27 | 54.7 | Jan. 2 | 53.0 | Mar. 9–10 | 62.8 | 1913 |
| Portsmouth, Ohio | 50 | 67.9 | Mar. 31 | 59.2 | Mar. 23 | 74.2 | Jan. 27 | 61.2 | Jan. 3 | 64.9 | Mar. 9 | 74.2 | 1937 |
| Cincinnati, Ohio | 52 | 69.9 | Apr. 1 | 60.6 | Mar. 28 | 80.0 | Jan. 26 | 60.8 | Jan. 4 | 60.2 | Mar. 7 | 80.0 | 1937 |
| Louisville, Ky. (upper gage) | 28 | 44.9 | Apr. 2 | 36.6 | Mar. 29 | 57.1 | Jan. 27 | 38.0 | Mar. 23–24 | 47.1 | Mar. 8 | 57.1 | 1937 |
| Evansville, Ind. | 37 | 48.4 | Apr. 5 | 44.4 | Mar. 31 | 53.75 | Jan. 31 | 45.2 | Mar. 26 | 48.3 | Mar. 12 | 53.75 | 1937 |
| Paducah, Ky. | 39 | 54.3 | Apr. 7 | 48.2 | Apr. 7 | 60.6 | Feb. 2 | 46.0 | Mar. 30 | 50.5 | Mar. 10 | 60.6 | 1937 |
| Cairo, Ill. | 40 | 54.7 | Apr. 7 | 52.2 | Apr. 8 | 59.5 | Feb. 3 | 53.0 | May 30 | 53.9 | Mar. 11 | 59.5 | 1937 |

*Provisional.

The main tributaries of the Ohio were in moderate flood, especially in the lower reaches. The tributaries in southern Ohio reached the highest stages of record during the last 20 years at some stations, but no floods equaled the 1913 records. The streams in Indiana were also at moderately high stages and the third largest flood of record was recorded in the lower portion of the Green River in Kentucky.

*White and Arkansas Basins.*—Rainfall over Arkansas during March was unusually heavy, averaging over 11 inches for the entire State. Amounts totaled as much as 18 inches, with many stations recording 15 inches or more. All rivers in Arkansas exceeded flood stage. Two or more rises occurred on all the rivers, and the lower portions of the White and Ouachita Rivers were in flood the entire month. Recurring floods occurred on the Poteau River and on the Arkansas below Muskogee, Okla., to Van Buren, Ark. Flood stages were also reached on the Neosho River from Burlington to Oswego, Kans. The floods on the Neosho and Arkansas were not severe; flood stages were exceeded by only 1 or 2 feet generally. Additional heavy rain fell over the South-central States on March 30–April 1, resulting in the highest stages of record in several streams of this area.

*Red and Lower Mississippi Basins.*—The Red River was at moderately high stages during the entire month. Flood stage was exceeded on several occasions in the upper river and at and below Grand Ecore, La., flood stages prevailed throughout the month and into April. Additional heavy rain at the end of March produced record stages at many points on the river during April. The lower Mississippi and Atchafalaya Rivers rose gradually during March as the flood waters of the Ohio joined with those of the upper Mississippi and Missouri Rivers. Flood stages on the lower Mississippi were generally exceeded by the middle of March. Excessive flows of tributaries draining Arkansas, Louisiana, and Mississippi, where rainfall was especially heavy during late March and early April, produced stages by mid-April on the lower Mississippi River that exceeded somewhat the stages reached by the flood of 1937. (See chart showing total precipitation for March.) The crest at New Orleans, La., was expected to be held below a critical stage of 20 feet by operation of the Bonnet Carre Spillway which can divert a maximum flow of 250,000 c. f. s. to Lake Pontchartrain.

*West Gulf of Mexico Drainage.*—Streamflow in eastern Texas was high during March with considerable flooding throughout the month. Heavy rains of March 30 and 31 fell over the entire eastern half of the State and exceeded 8 inches over a wide area of the upper Trinity, Neches, Sabine, Cypress Creek, and Sulphur River Basins in northeastern Texas. Record stages were reached on many streams by early April.

## FLOOD-STAGE REPORT FOR MARCH 1945

[All dates in March unless otherwise specified]

| River and station | Flood stage | Above flood stages—dates | | Crest[1] | |
|---|---|---|---|---|---|
| | | From— | To— | Stage | Date |
| **HUDSON BAY DRAINAGE** | | | | | |
| Red of North: | *Feet* | | | *Feet* | |
| Wahpeton, N. Dak. | 6 | 16 | 20 | 7.2 | 18 |
| Moorhead, Minn. | 17 | 16 | 29 | 26.6 | 22 |
| Grand Forks, N. Dak. | 25 | 24 | Apr. 2 | 32.0 | 30 |
| **ST. LAWRENCE DRAINAGE** | | | | | |
| *Lake Erie* | | | | | |
| | *Feet* | | | *Feet* | |
| St. Marys: Decatur, Ind. | 13 | 31 | (2) | | |
| Sandusky: Upper Sandusky, Ohio | 13 | 21 | 21 | 13.8 | 21 |
| **ATLANTIC SLOPE DRAINAGE** | | | | | |
| Kennebec: Augusta, Maine | 13 | 30 | (2) | | |
| Pemigewasset: Plymouth, N. H. | 11 | 21 | 21 | 11.0 | 21 |
| Connecticut: | | | | | |
| South Newbury, Vt. | 22 | 20 | 22 | 22.2 | 20–22 |
| | | 29 | Apr. 2 | 25.5 | 30 |
| White River Junction, Vt. | 18 | 22 | 22 | 18.0 | 22 |
| Montague City, Mass. | 28 | 21 | 23 | 29.6 | 22 |
| | | 19 | 26 | 18.3 | 20 |
| Hartford, Conn. | 16 | 29 | Apr. 3 | 20.9 | 23 |
| | | | | 17.5 | 31 |
| | | 4 | 4 | 12.7 | 4 |
| Tioughnioga: Whitney Point, N. Y. | 12 | 16 | 25 | 14.4 | 17 |
| | | | | 13.5 | 22 |
| Chenango: | | | | | |
| Sherburne, N. Y. | 8 | 3 | 4 | 8.5 | 3 |
| | | 16 | | 8.9 | 17 |
| | | | | 9.0 | 22 |
| Greene, N. Y. | 8 | 3 | 4 | 8.6 | 4 |
| | | 16 | 24 | 10.7 | 18 |
| | | | | 10.2 | 22 |
| Binghamton, N. Y. | 16 | 17 | 19 | 17.2 | 18 |
| | | 21 | 23 | 17.5 | 22 |
| | | 4 | 4 | 15.8 | 4 |
| Chemung: Chemung, N. Y. | 12 | 17 | 17 | 12.3 | 17 |
| | | 22 | 22 | 14.0 | 22 |
| Susquehanna: | | | | | |
| | | 3 | 9 | 15.7 | 4 |
| Oneonta, N. Y. | 12 | 16 | 20 | 14.7 | 7 |
| | | 21 | 25 | 15.6 | 18 |
| | | 3 | 5 | 15.1 | 22 |
| Bainbridge, N. Y. | 12 | 17 | 20 | 16.1 | 4 |
| | | 22 | 22 | 13.8 | 18 |
| | | | | 12.5 | 22 |
| | | 4 | 7 | 16.6 | 5 |
| Vestal, N. Y. | 14 | | | 16.2 | 6 |
| | | 16 | 25 | 19.1 | 18 |
| | | | | 19.0 | 22 |
| Towanda, Pa. | 16 | 4 | 4 | 16.2 | 4 |
| James: Columbia, Va. | 10 | 6 | 9 | 12.5 | 8 |
| Roanoke: Williamston, N. C. | 10 | Feb. 18 | 14 | 12.2 | Feb. 27–28 |
| Tar: Greenville, N. C. | 13 | Feb. 25 | 2 | 13.7 | Feb. 28 |
| Neuse: | | | | | |
| Goldsboro, N. C. | 14 | Feb. 23 | 4 | 16.1 | 2 |
| Kinston, N. C. | 14 | 1 | 6 | 14.5 | 4 |
| PeeDee: Mars Bluff Bridge, S. C. | 17 | Feb. 21 | 6 | 19.6 | Feb. 28 |
| Saluda: Pelzer, S. C. | 6 | 27 | 28 | 7.5 | 28 |
| Ocmulgee: Abbeville, Ga. | 11 | Feb. 27 | 4 | 11.5 | 2 |
| Altamaha: Charlotte, Ga. | 12 | Feb. 27 | 9 | 13.7 | 5 |
| **EAST GULF OF MEXICO DRAINAGE** | | | | | |
| Apalachicola: Blountstown, Fla. | 15 | Feb. 20 | 9 | 19.4 | Feb. 26 |
| Black Warrior: | | | | | |
| Lock No. 10, Tuscaloosa, Ala. | 47 | 5 | 7 | 52.7 | 6 |
| Lock No. 7, Eutaw, Ala. | 35 | Feb. 14 | 2 | 46.6 | Feb. 25 |
| | | 5 | 12 | 44.9 | 8 |

See footnotes at end of table.

## FLOOD-STAGE REPORT FOR MARCH 1945—Continued

[All dates in March unless otherwise specified]

| River and station | Flood stage | Above flood stages—dates | | Crest [1] | |
|---|---|---|---|---|---|
| | | From— | To— | Stage | Date |
| **EAST GULF OF MEXICO DRAINAGE—con.** | | | | | |
| Tombigbee: | *Feet* | | | *Feet* | |
| Aberdeen, Miss. | 34 | 4 | 9 | 38.3 | 6 |
| Columbus, Miss. | 29 | 6 | 9 | 30.6 | 7 |
| Gainesville, Ala. | 36 | Feb. 18 | 16 | 46.8 | 1 |
| Lock No. 4, Demopolis, Ala. | 39 | Feb. 14 | (2) | 56.4 | Feb. 28 |
| | | | | 55.3 | 9 |
| | | | | 46.2 | 28 |
| Lock No. 3. | 33 | Feb. 14 | (2) | 56.8 | Feb. 28–Mar. 1 |
| | | | | 50.3 | 28 |
| Lock No. 2. | 46 | Feb. 16 | (2) | 57.8 | 1–2 |
| | | | | 52.7 | 28 |
| Lock No. 1. | 31 | Feb. 17 | (2) | 38.9 | 6–7 |
| | | | | 37.3 | 28 |
| Sowashee Creek: Meridian, Miss. | 15 | 26 | 26 | 15.8 | 26 |
| Chickasawhay: Enterprise, Miss. | 20 | 18 | 18 | 20.0 | 18 |
| Pearl: | | | | | |
| Edinburgh, Miss. | 20 | Feb. 17 | 1 | 25.3 | Feb. 24 |
| Jackson, Miss. | 18 | Feb. 8 | (2) | 32.6 | 1 |
| | | | | 26.8 | 26 |
| | | | | 20.9 | Feb. 23, 26 |
| Monticello, Miss. | 15 | Feb. 21 | (2) | 22.0 | 5 |
| | | | | 20.3 | 19 |
| Columbia, Miss. | 17 | Feb. 23 | 15 | 19.6 | Feb. 27 |
| | | | | 20.9 | 9 |
| | | 17 | (2) | 19.0 | 23 |
| Pearl River, La. | 12 | Feb. 13 | (2) | 15.0 | 5 |
| | | | | 15.2 | 15 |
| **MISSISSIPPI SYSTEM** | | | | | |
| *Upper Mississippi Basin* | | | | | |
| Chippewa: Durand, Wis. | 11 | 17 | 17 | 11.0 | 17 |
| Zumbro: Theilman, Minn. | 35 | 13 | 17 | 41.1 | 15 |
| Whitewater: Beaver, Minn. | 7 | 14 | 16 | 8.8 | 14 |
| Trempealeau: Dodge, Wis. | 8 | 14 | 18 | 9.1 | 16 |
| Black: Galesville, Wis. | 12 | 19 | 19 | 12.3 | 19 |
| Root: Houston, Minn. | 15 | 14 | 17 | 15.9 | 15, 17 |
| Wisconsin: Portage, Wis. | 17 | 22 | 23 | 17.4 | 22 |
| Cedar: | | | | | |
| Waterloo, Iowa. | 12 | 14 | 19 | 18.4 | 17 |
| Cedar Rapids, Iowa. | 13 | 18 | 21 | 16.9 | 19 |
| Iowa: Wapello, Iowa. | 10 | 20 | 26 | 14.8 | 23 |
| | | 28 | 28 | 10.1 | 28 |
| Raccoon: Van Meter, Iowa. | 13 | 15 | 16 | 14.4 | 15 |
| Des Moines: | | | | | |
| Tracy, Iowa. | 14 | 15 | 21 | 18.6 | 17 |
| | | 25 | 27 | 15.8 | 26 |
| | | 2 | 2 | 16.2 | 2 |
| Eddyville, Iowa. | 15 | 15 | 22 | 19.5 | 18 |
| | | 25 | 27 | 17.0 | 26 |
| Ottumwa, Iowa. | 9 | 16 | 22 | 12.6 | 18 |
| | | 26 | 27 | 10.2 | 27 |
| Salt: New London, Mo. | 19 | 21 | 22 | 21.3 | 22 |
| | | 26 | 27 | 21.3 | 27 |
| Bourbeuse: Union, Mo. | 12 | 5 | 5 | 12.8 | 5 |
| Meramec: | | | | | |
| Sullivan, Mo. | 11 | 3 | 4 | 14.6 | 3 |
| | | 7 | 8 | 17.5 | 7 |
| | | 31 | (2) | 17.5 | Apr. 1 |
| | | 3 | 9 | 17.0 | 5 |
| | | | | 18.2 | 9 |
| Pacific, Mo. | 11 | 22 | 22 | 13.2 | 22 |
| | | 26 | 28 | 13.0 | 28 |
| | | 31 | (2) | 21.4 | Apr. 2 |
| | | | | 17.5 | 4 |
| | | 4 | 10 | 18.5 | 6 |
| Valley Park, Mo. | 14 | | | 21.3 | 8 |
| | | 27 | 28 | 16.3 | 27 |
| | | 31 | (2) | 26.8 | Apr. 3 |
| Mississippi: | | | | | |
| Minneapolis, Minn. | 16 | 18 | 18 | [3] 19.2 | 18 |
| Hastings Dam, Minn. | 15 | 23 | 24 | 15.1 | 24 |
| Winona, Minn. | 13 | 25 | 29 | 13.4 | 26 |
| La Crosse, Wis. | 12 | 18 | 20 | 12.3 | 19 |
| | | 25 | 31 | 12.4 | 27–28 |
| Dubuque, Iowa. | 18 | 27 | (2) | 18.9 | 29 |
| Gordons Ferry, Iowa. | 13 | 20 | (2) | 17.0 | 29–31 |
| Clinton, Iowa. | 16 | 26 | (2) | 17.6 | 31 |
| Davenport, Iowa. | 15 | 31 | (2) | 15.0 | 31 |
| Muscatine, Iowa. | 15 | 25 | (2) | | |
| Keithsburg, Ill. | 12 | 23 | (2) | | |
| Burlington, Iowa. | 15 | 27 | (2) | 15.3 | 31 |
| Keokuk, Iowa. | 12 | 21 | (2) | 16.8 | 26 |
| Gregory Landing, Mo. | 12 | 21 | (2) | 17.1 | 27 |
| Quincy, Ill. | 14 | 20 | (2) | 19.8 | 27 |
| Hannibal, Mo. | 13 | 19 | (2) | 19.9 | 27 |
| Louisiana, Mo. | 12 | 19 | (2) | 18.7 | 27 |

See footnotes at end of table.

## FLOOD-STAGE REPORT FOR MARCH 1945—Continued

[All dates in March unless otherwise specified]

| River and station | Flood stage | Above flood stages—dates | | Crest [1] | |
|---|---|---|---|---|---|
| | | From— | To— | Stage | Date |
| **MISSISSIPPI SYSTEM—continued** | | | | | |
| *Upper Mississippi Basin*—Continued | | | | | |
| Mississippi—Continued | *Feet* | | | *Feet* | |
| Grafton, Ill. | 18 | 26 | (2) | 22.6 | 31 |
| St. Louis, Mo. | 30 | 27 | (2) | 32.4 | 31 |
| Chester, Ill. | 27 | 25 | (2) | 33.4 | Apr. 3–4 |
| Cape Girardeau, Mo. | 32 | 23 | (2) | 38.7 | Apr. 3 |
| *Missouri Basin* | | | | | |
| Grand: | | | | | |
| Chillicothe, Mo. | 18 | 16 | 18 | 26.1 | 16 |
| | | 20 | 20 | 18.7 | 20 |
| | | 25 | 27 | 27.0 | 26 |
| Brunswick, Mo. | 12 | 16 | 22 | 14.5 | 18 |
| | | 25 | 30 | 15.7 | 27 |
| Osage: | | | | | |
| Quenemo, Kans. | 27 | 24 | 26 | 34.8 | 25 |
| Ottawa, Kans. | 24 | 25 | 27 | 28.7 | 26 |
| Osawatomie, Kans. | 28 | 25 | 28 | 32.2 | 26 |
| La Cygne, Kans. | 25 | 26 | 29 | 27.7 | 28 |
| Trading Post, Kans. | 24 | 28 | 30 | 24.4 | 26 |
| Osceola, Mo. | 20 | 21 | 22 | 20.9 | 21 |
| | | 25 | 27 | 21.9 | 26 |
| | | 5 | 5 | 15.0 | 5 |
| Gasconade: Jerome, Mo. | 15 | 7 | 9 | 16.4 | 8 |
| James: Huron, S. Dak. | 9 | 20 | 24 | 9.2 | 20 |
| Big Sioux: Akron, Iowa. | 12 | 11 | 19 | 17.4 | 13 |
| Floyd: | | | | | |
| Merrill, Iowa. | 13 | 11 | 12 | 13.5 | 11 |
| James, Iowa. | 14 | 10 | 17 | 18.4 | 12 |
| Missouri: | | | | | |
| Blair, Nebr. | 18 | 12 | 12 | 19.2 | 12 |
| Waverly, Mo. | 18 | 26 | 26 | 19.0 | 26 |
| Boonville, Mo. | 21 | 27 | 27 | 21.6 | 27 |
| Hermann, Mo. | 21 | 21 | 24 | 22.8 | 22 |
| | | 26 | (2) | 23.6 | 27–28 |
| St. Charles, Mo. | 25 | 21 | (2) | 28.9 | 29 |
| *Ohio Basin* | | | | | |
| Kiskiminitas: Vandergrift, Pa. | 25 | 7 | 7 | 25.3 | 7 |
| Allegheny: | | | | | |
| Olean, N. Y. | 10 | Feb. 27 | Feb. 28 | [4] 10.9 | Feb. 27 |
| | | 4 | 8 | 11.2 | 4 |
| | | 18 | 20 | 10.5 | 19 |
| | | 21 | 25 | 12.4 | 22 |
| Lock No. 8, Mosgrove, Pa. | 24 | 4 | 9 | 29.0 | 7 |
| | | 21 | 24 | 26.4 | 22 |
| Lock No. 5, Schenley, Pa. | 24 | Feb. 27 | Feb. 28 | [4] 27.0 | Feb. 27 |
| | | 3 | 9 | 33.8 | 7 |
| | | 21 | 24 | 27.7 | 22 |
| Lock No. 4, Natrona, Pa. | 24 | 4 | 5 | 25.8 | 4 |
| | | 6 | 9 | 31.3 | 7 |
| | | 22 | 23 | 26.0 | 22 |
| Lock No. 3, Acmetonia, Pa. | 25 | 4 | 5 | 26.1 | 4 |
| | | 6 | 9 | 32.1 | 7 |
| | | 22 | 23 | 26.0 | 22 |
| West Fork: Clarksburg, W. Va. | 5 | 7 | 7 | 6.7 | 7 |
| Monongahela: | | | | | |
| Lock No. 7, Greensboro, Pa. | 30 | 7 | 7 | 31.5 | 7 |
| Lock No. 6. | 19.5 | 4 | 4 | 19.6 | 4 |
| | | 6 | 7 | 21.4 | 7 |
| Lock No. 4, Charlerol, Pa. | 30 | 7 | 7 | 31.7 | 7 |
| | | Feb. 27 | 1 | 30.0 | Feb. 28–Mar. 1 |
| Lock No. 2. | 20.5 | 3 | 5 | 28.2 | 4 |
| | | 6 | 7 | 33.5 | 7 |
| | | 22 | 23 | 21.8 | 22 |
| Muskingum: | | | | | |
| Lock No. 10, Zanesville, Ohio. | 25 | 7 | 7 | 28.6 | 7 |
| Lock No. 7, McConnellsville, Ohio. | 22 | 21 | 21 | 25.4 | 21 |
| Lock No. 3, Lowell, Ohio. | 25 | 6 | 7 | 29.5 | 7 |
| | | 6 | 9 | 32.5 | 7 |
| Little Kanawha: Creston, W. Va. | 20 | 22 | 22 | 25.8 | 22 |
| Hocking: Athens, Ohio. | 17 | Feb. 27 | Feb. 28 | 22.4 | Feb. 27 |
| | | Feb. 27 | Feb. 28 | 18.1 | Feb. 28 |
| | | 4 | 4 | 17.2 | 4 |
| | | 6 | 9 | 22.7 | 7 |
| | | 21 | 23 | 18.3 | 22 |
| Olentangy: Delaware, Ohio. | 9 | 7 | 7 | 10.2 | 7 |
| | | 21 | 21 | 9.4 | 21 |
| Scioto: | | | | | |
| La Rue, Ohio. | 11 | 7 | 7 | 11.9 | 7 |
| | | 20 | 21 | 11.6 | 21 |
| Prospect, Ohio. | 10 | 22 | 22 | 10.4 | 22 |
| Circleville, Ohio. | 14 | Feb. 27 | Feb. 28 | 14.9 | Feb. 28 |
| | | 3 | 5 | 15.5 | 4 |
| | | 6 | 9 | 21.5 | 7 |
| Chillicothe, Ohio. | 16 | 20 | 23 | 19.0 | 21 |
| | | 6 | 10 | 25.7 | 8 |
| | | 21 | 23 | 21.7 | 22 |
| Piketon, Ohio. | 16 | Feb. 27 | 1 | 22.2 | Feb. 28 |
| | | 3 | 11 | 27.8 | 7 |
| | | 20 | 25 | 24.2 | 23 |
| Little Miami: Kings Mills, Ohio. | 17 | 3 | 3 | 18.2 | 3 |
| | | 5 | 7 | 26.5 | 6 |
| | | 20 | 20 | 21.0 | 20 |
| Licking: Falmouth, Ky. | 28 | Feb. 27 | Feb. 28 | 29.4 | Feb. 27 |
| | | 2 | 4 | 31.2 | 3 |
| | | 6 | | 835.6 | 7 |

See footnotes at end of table.

## FLOOD-STAGE REPORT FOR MARCH 1945—Continued

[All dates in March unless otherwise specified]

| River and station | Flood stage | Above flood stages—dates | | Crest [1] | |
|---|---|---|---|---|---|
| | | From— | To— | Stage | Date |
| MISSISSIPPI SYSTEM—continued | | | | | |
| *Ohio Basin*—Continued | | | | | |
| | *Feet* | | | *Feet* | |
| Mad: Springfield, Ohio | 11 | 6 | 6 | 11.2 | 6 |
| Miami: Middletown, Ohio | 15 | 6 | 6 | 15.9 | 6 |
| | | Feb. 23 | 11 | 25.8 | Feb. 24 |
| Rough: Dundee, Ky | 25 | | | 28.3 | 1,8 |
| | | 20 | 24 | 26.3 | 22 |
| North Fork: Jackson, Ky | 29 | 5 | 6 | 30.6 | 6 |
| Kentucky: | | | | | |
| Lock No. 9 | 20 | Feb. 27 | 3 | 21.0 | 1 |
| | | 5 | 9 | 26.1 | 7 |
| | | Feb. 27 | 4 | 23.2 | Feb. 27 |
| | | | | 24.3 | 1 |
| Lock No. 5 | 20 | | | 23.8 | 3 |
| | | 5 | 10 | 33.5 | 7 |
| Lock No. 4, Frankfort, Ky | 31 | 6 | 9 | 35.4 | 7 |
| Lock No. 2 | 45 | 7 | 9 | 46.4 | 7 |
| Barren: Bowling Green, Ky | 28 | 1 | 2 | 29.4 | 2 |
| Green: | | | | | |
| Munfordville, Ky | 28 | Feb. 28 | 3 | 32.2 | 2 |
| | | 6 | 9 | 33.9 | 8 |
| Lock No. 6, Brownsville, Ky | 28 | Feb. 26 | 10 | 33.0 | 2 |
| | | | | 35.6 | 8 |
| | | | | 40.2 | Feb. 25 |
| Lock No. 4, Woodbury, Ky | 33 | Feb. 22 | 12 | 42.9 | 3 |
| | | | | 42.8 | 6 |
| Lock No. 2, Rumsey, Ky | 34 | Feb. 23 | (2) | 44.4 | 13-14 |
| West Fork: | | | | | |
| Anderson, Ind | 10 | 7 | 8 | 11.0 | 7 |
| | | 4 | 4 | 18.4 | 4 |
| Elliston, Ind | 18 | 5 | 11 | 22.0 | 9 |
| | | 21 | 22 | 19.0 | 21 |
| | | 3 | 14 | 21.0 | 8 |
| Edwardsport, Ind | 12 | 20 | 26 | 17.4 | 23 |
| East Fork: | | | | | |
| | | 3 | 5 | 16.8 | 3 |
| Seymour, Ind | 14 | 6 | 10 | 18.6 | 7 |
| | | 20 | 22 | 16.9 | 21 |
| | | 2 | 14 | 21.5 | 9 |
| Williams, Ind | 10 | 23 | 26 | 11.2 | 24 |
| | | | | 25.9 | 4 |
| Shoals, Ind | 25 | 3 | 14 | 33.1 | 10 |
| | | | | 27.0 | 10 |
| Hazleton, Ind | 16 | Feb. 27 | (2) | 21.2 | 27 |
| Wabash: | | | | | |
| Wabash, Ind | 12 | 6 | 9 | 14.5 | 7 |
| La Fayette, Ind | 11 | 7 | 10 | 14.6 | 8 |
| Covington, Ind | 16 | 8 | 10 | 16.8 | 9 |
| Terre Haute, Ind | 14 | 31 | (2) | | |
| | | 4 | 21 | 23.9 | 11 |
| Mt. Carmel, Ill | 17 | 24 | 29 | 17.6 | 26-27 |
| New Harmony, Ind | 15 | 6 | 21 | 20.1 | 12 |
| Cumberland: | | | | | |
| | | 2 | 3 | 28.2 | 2 |
| Celina, Tenn | 28 | 8 | 9 | 29.1 | 8 |
| Nashville, Tenn | 40 | Feb. 22 | 2 | 44.6 | Feb. 23 |
| | | | | 43.5 | Feb. 28 |
| Clarksville, Tenn | 46 | Feb. 22 | 5 | 51.1 | 1 |
| Lock F, Eddyville, Ky | 50 | Feb. 22 | 24 | 60.6 | 4 |
| Ohio: | | | | | |
| | | 4 | 5 | 26.9 | 4 |
| Pittsburgh, Pa | 25 | 6 | 9 | 33.4 | 7 |
| Coraopolis, Pa | 26 | 6 | 8 | 32.2 | 7 |
| | | 4 | 5 | 35.1 | 4 |
| Dam No. 7, Midland, Pa | 30 | 7 | 9 | 44.3 | 7 |
| | | 23 | 23 | 33.5 | 23 |
| Dam No. 12, nr. Wheeling, W. Va | 36 | 5 | 5 | 36.6 | 5 |
| | | 6 | 10 | 47.3 | 8 |
| Dam No. 13, nr. Wheeling, W. Va | 45 | 7 | 9 | 50.3 | 8 |
| Marietta, Ohio: | | Feb. 28 | 2 | 37.8 | 1 |
| Lower gage (Muskingum) | 35 | 3 | 11 | 48.2 | 8 |
| | | 23 | 24 | 36.4 | 24 |
| | | Feb. 28 | 2 | 38.4 | 1 |
| Parkersburg, W. Va | 36 | 4 | 11 | 37.2 | 6 |
| | | | | 48.5 | 9 |
| | | 24 | 24 | 36.0 | 24 |
| | | 1 | 2 | 41.1 | 1 |
| Dam No. 19, Little Hocking, Ohio | 40 | 6 | 11 | 51.1 | 9 |
| Dam No. 20, near Belleville, W. Va | 45 | 7 | 11 | 51.4 | 9 |
| Dam No. 22, Ravenswood, W. Va | 44 | 1 | 2 | 44.7 | 1 |
| | | 6 | 12 | 54.5 | 9 |
| | | | | 46.9 | 2 |
| Dam No. 23, Millwood, W. Va | 45 | 1 | 12 | 46.6 | 4 |
| | | | | 56.5 | 9 |
| | | Feb. 28 | 13 | 48.6 | 4 |
| Point Pleasant, W. Va | 40 | | | 53.2 | 9 |
| | | 24 | 25 | 40.5 | 24 |
| Gallipolis Dam, Hogsett, W. Va | 50 | 1 | 12 | 54.2 | 4 |
| | | | | 59.2 | 10 |
| Dam No. 28, Huntington, W. Va | 50 | 1 | 13 | 55.2 | 4 |
| | | | | 59.9 | 9 |
| Dam No. 29, Ashland, Ky | 51 | Feb. 28 | 13 | 59.0 | 4 |
| | | | | 63.8 | 9 |
| Dam No. 30, near Greenup, Ky | 52 | Feb. 28 | 13 | 60.0 | 4 |
| | | | | 65.2 | 9 |
| Portsmouth, Ohio | 50 | Feb. 28 | 14 | 58.6 | 4 |
| | | | | 64.9 | 9 |

See footnotes at end of table.

## FLOOD-STAGE REPORT FOR MARCH 1945—Continued

[All dates in March unless otherwise specified]

| River and station | Flood stage | Above flood stages—dates | | Crest [1] | |
|---|---|---|---|---|---|
| | | From— | To— | Stage | Date |
| MISSISSIPPI SYSTEM—continued | | | | | |
| *Ohio Basin*—Continued | | | | | |
| Ohio—Continued. | *Feet* | | | *Feet* | |
| Dam No. 32, near Vanceburg, Ky | 53 | 1 | 14 | 59.4 | 4-5 |
| | | | | 65.6 | 9 |
| Dam No. 33, near Maysville, Ky | 50 | Feb. 28 | 15 | 59.4 | 4 |
| | | | | 65.5 | 9 |
| Dam No. 34, Chilo, Ohio | 49 | 1 | 15 | 57.3 | 5 |
| | | | | 63.4 | 9 |
| Dam No. 35, New Richmond, Ohio | 48 | Feb. 28 | 15 | 64.3 | 7 |
| | | | | 64.2 | 9 |
| Dam No. 36, near Brent, Ky | 52 | Feb. 28 | 15 | 62.0 | 4 |
| | | | | 68.8 | 7 |
| Cincinnati, Ohio | 52 | Feb. 28 | 15 | 62.2 | 4 |
| | | | | 69.2 | 7 |
| Dam No. 37, Fernbank, Ohio | 50 | Feb. 27 | 16 | 61.2 | 4 |
| | | | | 68.4 | 7 |
| Dam No. 38, near Grant, Ky | 51 | Feb. 28 | 16 | 68.3 | 8 |
| Dam No. 39, Markland, Ind | 48 | 2 | 16 | 62.6 | 8 |
| Madison, Ind | 46 | 1 | 16 | 61.5 | 8 |
| Dam No. 41, Louisville, Ky.: | | | | | |
| (Upper gage) | 28 | Feb. 28 | 17 | 47.1 | 8-9 |
| (Lower gage) | 55 | Feb. 28 | 17 | 74.4 | 8-9 |
| Dam No. 43, Evans Landing, Ind | 57 | Feb. 28 | 17 | 75.8 | 9 |
| Dam No. 44, Leavenworth, Ind | 53 | Feb. 27 | 18 | 74.0 | 9 |
| Dam No. 45, Addison, Ky | 47 | Feb. 27 | 19 | 61.9 | 9-10 |
| Tell City, Ind | 38 | Feb. 24 | 22 | 52.0 | 10 |
| | | 28 | 30 | 38.5 | 29 |
| Dam No. 46, Owensboro, Ky | 41 | Feb. 28 | 20 | 49.7 | 11 |
| Dam No. 47, Newburgh, Ind | 38 | Feb. 23 | (2) | 50.9 | 12 |
| | | | | 42.1 | 29 |
| Evansville, Ind | 37 | Feb. 24 | (2) | 48.3 | 12 |
| | | | | 39.9 | 30 |
| Dam No. 48, near Henderson, Ky | 38 | Feb. 25 | (2) | 51.8 | 13 |
| Mount Vernon, Ind | 35 | Feb. 25 | (2) | 51.2 | 14 |
| Dam No. 49, Uniontown, Ky | 37 | Feb. 27 | (2) | 54.6 | 14-15 |
| Shawneetown, Ill | 33 | Feb. 24 | (2) | 55.6 | 14 |
| Dam No. 50, Fords Ferry, Ky | 34 | Feb. 23 | (2) | 58.3 | 14-16 |
| Dam No. 51, Golconda, Ill | 40 | Feb. 28 | (2) | 53.2 | 15 |
| Paducah, Ky | 39 | Feb. 25 | (2) | 50.5 | 10 |
| Dam No. 52, Brookport, Ill | 37 | Feb. 22 | (2) | 52.3 | 10 |
| Dam No. 53, near Mound City, Ill | 42 | Feb. 22 | (2) | 56.3 | 11 |
| | | | | 53.9 | 11 |
| Cairo, Ill | 40 | 23 | (2) | 53.8 | 21-22 |
| *White Basin* | | | | | |
| Buffalo: Gilbert, Ark | 30 | 30 | 30 | 30.4 | 30 |
| Current: Doniphan, Mo | 10 | Feb. 26 | Feb. 28 | 15.1 | Feb. 27 |
| | | 7 | 8 | 11.9 | 8 |
| | | 31 | (2) | | |
| Black: | | | | | |
| Leeper, Mo | 11 | 31 | (2) | | |
| Williamsville, Mo | 11 | 6 | | 13.8 | 7 |
| | | 31 | (2) | 15.9 | 31 |
| | | Feb. 27 | 2 | 19.7 | Feb. 28 |
| | | 4 | 6 | 16.3 | 5 |
| | | 6 | 10 | 18.8 | 8 |
| Poplar Bluff, Mo | 16 | 20 | 22 | 17.2 | 21 |
| | | 28 | 28 | 16.0 | 28 |
| | | 31 | (2) | | |
| | | | | 20.0 | Feb. 23 |
| | | | | 25.3 | Feb. 28 |
| | | | | 23.9 | 4 |
| Black Rock, Ark | 14 | Feb. 21 | (2) | 24.9 | 7-8 |
| | | | | 22.0 | 16-17 |
| | | | | 24.9 | 20 |
| | | | | 22.3 | 26-27 |
| White: | | | | | |
| Cotter, Ark | 21 | 21 | 23 | 22.8 | 22 |
| | | Feb. 26 | 1 | 26.8 | Feb. 27 |
| Calico Rock, Ark | 19 | 3 | 9 | 21.5 | 4 |
| | | | | 21.4 | 7 |
| | | 19 | 23 | 28.0 | 20 |
| | | 30 | (2) | 29.4 | 31 |
| | | Feb. 26 | | 31.3 | Feb. 27-28 |
| BatesvilleArk | 23 | | 10 | 27.4 | 4 |
| | | | | 27.5 | 8 |
| | | 19 | 24 | 31.4 | 21 |
| | | 30 | (2) | 33.2 | 31 |
| | | Feb. 23 | 16 | 30.4 | 1 |
| Newport, Ark | 26 | | | 30.8 | 7, 9 |
| | | 19 | (2) | 31.6 | 23 |
| | | | | 36.4 | |
| Augusta, Ark | 32 | Feb. 25 | (2) | 36.3 | 25 |

See footnotes at end of table.

## FLOOD-STAGE REPORT FOR MARCH 1945—Continued

[All dates in March unless otherwise specified]

| River and station | Flood stage | Above flood stages—dates | | Crest[1] | |
|---|---|---|---|---|---|
| | | From— | To— | Stage | Date |
| **MISSISSIPPI SYSTEM—continued** | | | | | |
| ***Ohio Basin*—Continued** | | | | | |
| | *Feet* | | | *Feet* | |
| White—Continued. | | | | 29.8 | 9-10 |
| Georgetown, Ark. | 21 | Feb. 24 | (2) | 29.1 | 26-27 |
| | | | | 34.5 | 10-12 |
| Des Arc, Ark. | 24 | Feb. 26 | (2) | 33.3 | 27-28 |
| Clarendon, Ark. | 26 | Feb. 27 | (2) | 33.4 | 14-16 |
| St. Charles, Ark. | 25 | 2 | (2) | | |
| ***Arkansas Basin*** | | | | | |
| Verdigris: Independence, Kans. | 36 | 26 | 26 | 36.4 | 26 |
| Neosho: | | | | | |
| Burlington, Kans. | 27 | 24 | 25 | 27.7 | 24-25 |
| LeRoy, Kans. | 23 | 25 | 25 | 25.5 | 25 |
| Iola, Kans. | 15 | 25 | 26 | 17.6 | 26 |
| Oswego, Kans. | 17 | 20 | 21 | 18.4 | 21 |
| | | | 9 | 31.0 | 1 |
| | | 12 | 15 | 25.2 | 14 |
| Poteau: Poteau, Okla. | 21 | | 27 | 31.6 | 20 |
| | | | | 23.9 | 26 |
| | | | (2) | | |
| | | | | 21.5 | Feb. 19 |
| | | Feb. 18 | | 27.0 | Feb. 22 |
| | | | 10 | 26.5 | Feb. 28 |
| | | | | 24.8 | 4 |
| Petit Jean: Danville, Ark. | 20 | | | 23.4 | 14 |
| | | 13 | 24 | 25.8 | 21 |
| | | 25 | (2) | 29.5 | 31 |
| Arkansas: | | | | | |
| Webbers Falls, Okla. | 23 | 19 | 21 | 26.6 | 20 |
| | | 3 | 5 | 22.9 | 4 |
| | | 16 | 18 | 22.9 | 17 |
| Fort Smith, Ark. | 22 | 18 | 23 | 29.3 | 21 |
| | | 30 | (2) | | |
| | | 3 | 6 | 23.9 | 4 |
| | | 16 | 26 | 23.5 | 17 |
| Van Buren, Ark. | 22 | | | 29.8 | 21 |
| | | 28 | 28 | 22.3 | 28 |
| | | 30 | (2) | | |
| Ozak, Ark. | 22 | 19 | 23 | 25.4 | 21 |
| | | 4 | 6 | 23.2 | 5 |
| Dardanelle, Ark. | 22 | 18 | 27 | 28.6 | 22 |
| | | 29 | (2) | | |
| Morrillton, Ark. | 20 | 19 | 26 | 24.1 | 22 |
| | | 29 | (2) | | |
| Little Rock, Ark. | 23 | 21 | 24 | 24.0 | 24 |
| | | 31 | (2) | | |
| Pine Bluff, Ark. | 25 | 21 | 26 | 26.8 | 23 |
| ***Red Basin*** | | | | | |
| Little Missouri: Boughton, Ark. | 20 | Feb. 28 | 2 | 22.0 | 1 |
| | | 30 | (2) | 27.2 | 31 |
| Saline: Benton, Ark. | 20 | Feb. 28 | Feb. 28 | 20.6 | Feb. 28 |
| | | 30 | (2) | | |
| Ouachita: | | Feb. 27 | 5 | 25.4 | Feb. 28 |
| | | 13 | 14 | 19.3 | 13 |
| Arkadelphia, Ark. | 17 | 19 | 22 | 22.3 | 21 |
| | | 29 | (2) | | |
| | | | | 35.8 | Feb. 27 |
| | | | | 38.2 | 4 |
| Camden, Ark. | 26 | Feb. 23 | (2) | 33.0 | 18 |
| | | | | 33.8 | 25 |
| Monroe, La. | 40 | 10 | (2) | | |
| Black: Jonesville, La. | 50 | 18 | (2) | | |
| | | Feb. 23 | 10 | 28.0 | Feb. 24 |
| Little: Whitecliffs, Ark. | 25 | | | 28.6 | 2 |
| | | 21 | (2) | 27.4 | 23 |
| Sulphur: | | | | | |
| | | Feb. 26 | 5 | 42.0 | Feb. 28 |
| | | 13 | 13 | 38.8 | 13 |
| Hagansport, Tex. | 38 | 15 | 17 | 39.1 | 16 |
| | | 20 | 20 | 38.8 | 20 |
| | | 30 | (2) | | |
| | | Feb. 21 | 15 | 29.7 | Feb. 25 |
| | | | | 30.3 | 3 |
| Naples, Tex. | 22 | | | 26.1 | 20 |
| | | 15 | (2) | | |
| | | Feb. 26 | 12 | 20.6 | Feb. 27 |
| Cypress: Jefferson, Tex. | 18 | | | 22.1 | 5 |
| | | 14 | 14 | 18.0 | 14 |
| Red: | | | | | |
| Index, Ark. | 25 | 6 | 6 | 25.5 | 6 |
| | | 30 | (2) | | |
| | | Feb. 23 | 11 | 30.5 | 3 |
| Fulton, Ark. | 25 | 14 | 15 | 25.4 | 15 |
| | | 19 | | 28.1 | 24 |
| | | | (2) | | |
| Garland, Ark. | 30 | 31 | (2) | | |
| | | | | 38.6 | 12 |
| Grand Ecore, La. | 33 | 3 | (2) | 37.8 | 28 |
| | | | | 40.0 | 20 |
| Alexandria, La. | 32 | 2 | (2) | 39.7 | 25 |

## FLOOD-STAGE REPORT FOR MARCH 1945—Continued

[All dates in March unless otherwise specified]

| River and station | Flood stage | Above flood stages—dates | | Crest[1] | |
|---|---|---|---|---|---|
| | | From— | To— | Stage | Date |
| **MISSISSIPPI SYSTEM—continued** | | | | | |
| ***Lower Mississippi Basin*** | | | | | |
| | *Feet* | | | *Feet* | |
| Wolf: Rossville, Tenn. | 10 | Feb. 28 | 1 | 10.8 | Feb. 28 |
| Big Lake Outlet: Manila, Ark. | 10 | Feb. 23 | (2) | 15.8 | 10-11 |
| St. Francis: | | | | | |
| Fisk, Mo. | 20 | 18 | 21 | 21.0 | 20 |
| | | 24 | (2) | | |
| | | Feb. 28 | 10 | 19.6 | 4, 7 |
| St. Francis, Ark. | 18 | 19 | (2) | 20.2 | 23 |
| | | | | 20.3 | 26 |
| Madison, Ark. | 32 | 31 | (2) | | |
| Tallahatchie: Swan Lake, Miss. | 26 | Feb. 27 | (2) | 30.6 | 8 |
| | | | | 28.7 | 28 |
| Yazoo: | | | | | |
| Greenwood, Miss. | 35 | 8 | (2) | 37.0 | 14 |
| | | | | 36.1 | 27 |
| Yazoo City, Miss. | 29 | 5 | (2) | 35.0 | 26 |
| Mississippi: | | | | | |
| New Madrid, Mo. | 34 | Feb. 27 | (2) | 42.0 | 12 |
| | | | | 42.1 | 22-23 |
| | | | | 42.1 | Apr. 4 |
| | | | | 37.7 | 17 |
| Memphis, Tenn. | 34 | 9 | (2) | 38.9 | 27 |
| Helena, Ark. | 44 | 14 | (2) | | |
| Arkansas City, Ark. | 42 | 22 | (2) | | |
| Greenville, Miss. | 39 | | (4) | | |
| Vicksburg, Miss. | 43 | 26 | (2) | | |
| Natchez, Miss. | 48 | 21 | (2) | | |
| Red River Landing, La. | 45 | 15 | (2) | | |
| Baton Rouge, La. | 35 | 14 | (2) | | |
| Donaldsonville, La. | 28 | 15 | (2) | | |
| | | | | 24.9 | 26 |
| Reserve, La. | 22 | 16 | (2) | 25.0 | 30 |
| | | | | 19.1 | 26 |
| New Orleans, La.[5] | 17 | 16 | (2) | 19.2 | 29-30 |
| Atchafalaya: | | | | | |
| Simmesport, La. | 41 | 20 | (2) | | |
| Melville, La. | 37 | 16 | (2) | | |
| Atchafalaya, La. | 25 | 8 | (2) | | |
| Morgan City, La. | 6 | 30 | (2) | | |
| **WEST GULF OF MEXICO DRAINAGE** | | | | | |
| Sabine: | | | | 35.1 | Feb. 28 |
| | | | | 36.8 | 5 |
| Gladewater, Tex. | 26 | Feb. 24 | (2) | 31.2 | 25 |
| Logansport, La. | 25 | 4 | (2) | 34.2 | 11 |
| Bon Wier, Tex. | 17 | 15 | (2) | 19.8 | 27-28 |
| West Fork: Fort Worth, Tex. | 17 | 30 | 30 | 19.4 | 30 |
| | | Feb. 27 | 7 | 11.3 | Feb. 28 |
| Elm Fork: Carrollton, Tex. | 6 | 16 | 17 | 6.4 | 17 |
| | | 20 | 23 | 9.2 | 21 |
| | | 29 | (2) | | |
| | | | | 19.4 | Feb. 28 |
| | | Feb. 26 | 10 | 14.2 | 4 |
| | | | | 12.3 | 8 |
| East Fork: Rockwall (nr.), Tex. | 10 | | | 14.8 | 14 |
| | | 12 | 23 | 14.2 | 17 |
| | | | | 14.3 | 21 |
| | | 29 | (2) | | |
| Trinity: | | | | | |
| | | Feb. 21 | 10 | 40.6 | Feb. 23 |
| | | | | 38.1 | 1 |
| | | | | 31.8 | 13 |
| Dallas, Tex. | 28 | 12 | 26 | 31.4 | 16 |
| | | | | 32.1 | 20 |
| | | | | 33.7 | 23 |
| | | 29 | (2) | 41.0 | 31 |
| Rosser (nr.), Tex. | 26 | | | 37.2 | Feb. 25 |
| | | | (2) | 29.4 | 17 |
| | | | | 31.0 | 30 |
| | | | | 42.0 | Feb. 28 |
| Trinidad, Tex. | 28 | Feb. 20 | (2) | 43.6 | 5 |
| | | | | 35.6 | 24 |
| | | | | 42.8 | Feb. 27 |
| Long Lake, Tex. | 40 | Feb. 25 | 29 | 46.8 | 8 |
| | | 29 | (2) | 41.0 | 28 |
| Riverside, Tex. | 40 | 11 | 19 | 44.4 | 14 |
| Liberty, Tex. | 24 | Feb. 23 | (2) | 24.6 | Feb. 26 |
| | | | | 27.8 | 21-23 |
| Guadalupe: Gonzales, Tex. | 20 | 31 | (2) | | |

[1] Provisional.
[2] Continued into April.
[3] Ice gorge below gage.
[4] Stage affected by ice.
[5] Stages after March 23 affected by operation of Bonnet Carre Spillway.

## CLIMATOLOGICAL DATA

### CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION BY SECTIONS

[For description of tables and charts, see Review, January 1943, p. 15]

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

| Section | Temperature | | | | | | | | Precipitation | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Monthly extremes | | | | | | | | Greatest monthly | | Least monthly | |
| | Section average | Departure from the normal | Station | Highest | Date | Station | Lowest | Date | Section average | Departure from the normal | Station | Amount | Station | Amount |
| | °F. | °F. | | °F. | | | °F. | | In. | In. | | In. | | In. |
| Alabama | 65.0 | +9.0 | 5 stations | 89 | [1] 16 | Valley Head | 27 | 10 | 4.89 | −0.85 | Unlontown | 12.31 | Newton | 0.56 |
| Arizona | 47.2 | −4.3 | Mohawk | 90 | 31 | Alpine | −12 | 6 | 2.11 | +1.03 | Junipine | 9.67 | Mohawk | .00 |
| Arkansas | | | | | | | | | | | | | | |
| California | 46.6 | −4.6 | Palm Springs | 94 | 31 | Ellery Lake | −16 | 7 | 4.48 | +.79 | Giant Forest | 15.50 | Calexico | .00 |
| Colorado | 35.8 | +1.3 | 2 stations | 82 | 21 | Taylor Park | −33 | 8 | 1.05 | −.27 | Wolf Creek Pass | 10.81 | 2 stations | .00 |
| Florida | 71.0 | +5.7 | Bushnell | 96 | 6 | 2 stations | 32 | 23 | .70 | −2.50 | Chattahoochee | 3.96 | 13 stations | .00 |
| Georgia | 64.3 | +8.0 | Camp Stewart | 93 | [1] 16 | Blairsville | 25 | [1] 1 | 2.60 | −2.38 | Ellijay | 5.58 | Brunswick Airport | .06 |
| Idaho | 34.6 | −1.1 | 6 stations | 69 | [1] 12 | Deadwood Dam | −25 | 4 | 2.31 | +.55 | Deception Creek | 10.28 | Barton Flat | .05 |
| Illinois | 51.6 | +10.7 | E. St. Louis | 88 | 16 | Freeport | 14 | 7 | 6.38 | +3.19 | DuQuoin | 13.94 | Rockford Airport | 1.40 |
| Indiana | 52.2 | +11.4 | Tell City | 88 | 25 | 2 stations | 5 | 8 | 7.96 | +4.18 | Salem | 14.40 | Albion | 2.05 |
| Iowa | 45.3 | +10.7 | Keosauqua | 85 | 27 | Decorah | −11 | 7 | 2.88 | +1.13 | 2 stations | 5.15 | Akron | .86 |
| Kansas | 50.3 | +6.9 | Medicine Lodge | 87 | 27 | Tribune | −3 | 6 | 1.96 | +.51 | Burlington | 7.68 | Johnson | T |
| Kentucky | 56.5 | +10.1 | Pikesville | 91 | 25 | Clermont | 20 | 9 | 7.06 | +2.29 | Henderson | 12.28 | Corbin | 2.96 |
| Louisiana | 66.5 | +5.9 | 3 stations | 89 | [1] 17 | 4 stations | 33 | [1] 1 | 5.57 | +.81 | Shreveport | 11.99 | Burrwood | 1.21 |
| Maryland-Delaware | 53.0 | +10.2 | Takoma, Md | 91 | 29 | Mount Savage Summit, Md. | 17 | [1] 1 | 1.70 | −1.93 | Sines, Md | 5.26 | Annapolis, Md | .63 |
| Michigan | 42.4 | +12.6 | Dowagiac | 84 | 27 | Watersmeet | −28 | 7 | 1.72 | −.37 | Adrian | 5.01 | Painesdale | .25 |
| Minnesota | 36.0 | +9.4 | Winona | 81 | 23 | Bemidji | −38 | 6 | 1.81 | +.59 | Cloquet | 3.31 | Canby | .65 |
| Mississippi | 64.4 | +7.4 | 2 stations | 89 | [1] 16 | Eupora | 29 | 1 | 7.34 | +1.49 | Scott | 11.90 | Bay St. Louis | 2.01 |
| Missouri | 52.6 | +8.6 | do | 89 | [1] 16 | 2 stations | 2 | 7 | 7.44 | +4.19 | Jackson | 15.91 | Grant City | 2.54 |
| Montana | 34.1 | +3.0 | Forsyth | 77 | 21 | 3 stations | −42 | 5 | 1.12 | +.14 | Mystic Lake | 5.20 | Harlowton | T |
| Nebraska | 43.5 | +7.0 | Beaver City | 87 | 27 | Harrison | −14 | 5 | .90 | −.21 | Falls City | 3.38 | Haigler | T |
| Nevada | 38.0 | −2.5 | Mesquite | 87 | 21 | Fish Creek Ranch | −18 | 5 | 1.50 | +.60 | Marlette Lake | 6.01 | Rattlesnake | .21 |
| New England | 40.7 | +8.5 | Providence, R. I | 90 | 29 | Lake Frontiere, Maine | −29 | 12 | 2.08 | −1.57 | Eastport, Maine | 4.40 | Bethlehem, N. H | .97 |
| New Jersey | 49.2 | +10.0 | Bridgeton | 91 | 29 | Charlotteburg | 11 | 5 | 2.37 | −1.44 | Paterson | 3.56 | Cape May | .47 |
| New Mexico | 43.2 | −.4 | Melrose | 90 | 10 | Eagle Nest | −26 | 8 | .59 | −.17 | Selsor Ranch | 3.12 | 13 stations | .00 |
| New York | 43.1 | +10.9 | Bedford Hills | 91 | 29 | Stillwater Reservoir | −5 | 1 | 2.68 | −.40 | Little Valley | 7.19 | Alcove Dam | 1.01 |
| North Carolina | 59.2 | +9.2 | Scotland Neck | 95 | 17 | Mount Mitchell | 16 | 22 | 2.51 | −1.72 | Rock House | 6.29 | Wilmington | .26 |
| North Dakota | 33.3 | +9.5 | Linton | 77 | 22 | 2 stations | −27 | 5 | 1.34 | +.54 | Bisbee | 3.20 | Pettibone | .25 |
| Ohio | 50.2 | +11.3 | 2 stations | 89 | 25 | Ottawa | 11 | 8 | 7.20 | +3.72 | Mount Healthy | 12.22 | Willoughby | 3.49 |
| Oklahoma | 55.1 | +4.3 | Hollis | 90 | 20 | Norman | 8 | 1 | 5.17 | +2.98 | Smithville | 19.46 | Hooker | .10 |
| Oregon | 38.5 | −2.5 | Medford | 75 | 30 | Austin | −18 | 5 | 3.74 | +1.00 | Valsetz | 19.31 | Redmond | .09 |
| Pennsylvania | 48.1 | +10.6 | Marcus Hook | 91 | 29 | 2 stations | 5 | [1] 1 | 3.91 | +.39 | Vandergrift | 8.30 | Doylestown | 1.39 |
| South Carolina | 63.4 | +8.6 | Walterboro | 97 | 19 | do | 28 | [1] 1 | 2.39 | −1.60 | Longcreek | 6.70 | Georgetown Coast Guard Station. | .72 |
| South Dakota | 38.2 | +7.0 | Gregory | 82 | 22 | do | −25 | [1] 5 | 1.26 | +.15 | Spearfish | 3.20 | Eureka | .25 |
| Tennessee | 59.0 | +9.5 | 2 stations | 88 | 16 | Rugby | 21 | 11 | 4.01 | −1.35 | Union City | 8.53 | Byrdstown | 1.41 |
| Texas | 62.9 | +4.4 | do | 105 | 24 | 2 stations | 12 | 6 | 3.57 | +1.58 | Mount Pleasant | 17.12 | 2 stations | .00 |
| Utah | 36.2 | −2.0 | St. George | 78 | 21 | Moon Lake | −19 | 6 | 2.28 | +.83 | Alta | 7.77 | do | .45 |
| Virginia | 55.7 | +9.9 | 2 stations | 93 | 17 | Big Meadow | 17 | 1 | 1.79 | −1.88 | Clifton Forge | 3.77 | Quantico | .50 |
| Washington | 39.9 | −1.8 | Sunnyside | 74 | 30 | Newport | −12 | 5 | 4.93 | +1.67 | Quinault | 23.13 | Lakeside | .16 |
| West Virginia | 52.1 | +9.6 | 2 stations | 91 | [1] 25 | Pickens | 12 | 12 | 4.58 | +.64 | Dam No. 13 O. R | 8.03 | Brandywine | 1.45 |
| Wisconsin | 40.5 | +11.2 | Kenosha | 82 | 27 | Long Lake | −28 | 7 | 1.90 | +.15 | Cumberland | 4.07 | 2 stations | .81 |
| Wyoming | 31.7 | +1.9 | Hawk Springs | 78 | 21 | Moran | −38 | 6 | 1.16 | +.02 | Bechler River | 4.39 | Powell | .18 |
| Alaska (February) | 13.6 | +5.3 | Eklutna | 54 | 23 | Allakaket | −65 | 13 | 2.52 | +.32 | Latouche | 21.77 | Wainwright | .02 |
| Hawaii | 70.5 | +1.6 | 2 stations | 90 | [1] 18 | Haleakala Ranger Station. | 37 | 7 | 8.73 | +.86 | Makahanaloa No. 2 | 54.40 | 3 stations | .00 |
| Puerto Rico | 72.8 | −.5 | Juana Diaz Camp | 94 | 4 | Utuado | 50 | [1] 21 | 1.72 | −1.44 | Rio Blanco (1,800) ft | | Coamo Dam | .05 |
| Puerto Rico (Feb.) | 72.8 | +.1 | 2 stations | 94 | [1] 11 | Utuado | 51 | 14 | 3.01 | −.10 | Rio Blanco (1,800) ft | 11.11 | 5 stations | .00 |

[1] Other dates also.

## CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS

| District and station | Elevation of instruments: Barometer above sea level | Thermometer above ground | Anemometer above ground | Pressure: Station | Sea level | Departure from normal | Temperature of the air: Mean | Departure from normal | Maximum | Date | Mean maximum | Minimum | Date | Mean minimum | Greatest daily range | Total degree days | Mean temperature of the dew-point | Mean relative humidity | Precipitation: Total | Departure from normal | Greatest in 24 hours | Days with 0.01 inch or more | Wind: Average hourly velocity | Prevailing direction | Maximum velocity: Miles per hour | Direction | Date | Clear days | Partly cloudy days | Cloudy days | Average cloudiness, tenths | Total snowfall | Snow, sleet, and ice on ground at end of month: Number of days with thunderstorms |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ft. | Ft. | Ft. | Mbs. | Mbs. | Mbs | °F | °F | °F | | °F | °F | | °F | °F | | °F | % | In. | In. | In. | | Mi. | | | | | | | | 0–10 | In. | In. | |
| **New England** | | | | | | | **41.5** | **+9.2** | | | | | | | | | | **75** | **2.25** | **−1.2** | | | | | | | | | | | **5.8** | | | |
| Eastport | 75 | 67 | 85 | 1,011.2 | 1,014.6 | +1.1 | 38.5 | +7.0 | 76 | 29 | 43 | 12 | 8 | 30 | 40 | 882 | 26 | 70 | 4.40 | +.6 | 1.93 | 14 | 10.7 | sw. | 34 | e. | 22 | 8 | 5 | 18 | 6.7 | 6.1 | .0 | 1 |
| Greenville, Maine | 1,070 | 6 | 41 | 974.3 | 1,014.9 | ----- | 31.3 | +6.8 | 70 | 29 | 43 | −11 | 12 | 19 | 44 | 1,046 | 24 | --- | 1.92 | −1.0 | .39 | 13 | ---- | s. | ---- | ---- | ---- | 9 | 8 | 14 | ---- | 8.5 | 1.0 | 0 |
| Portland, Maine [1] | 103 | 5 | 43 | 1,010.5 | 1,014.9 | +.3 | 38.6 | +6.8 | 83 | 29 | 49 | 9 | 5 | 28 | 49 | 818 | 30 | 80 | 1.85 | −2.0 | .74 | 11 | 9.3 | n. | 28 | ne. | 21 | 12 | 7 | 12 | 5.5 | 3.3 | .0 | 2 |
| Concord [1] | 289 | 5 | 45 | 1,004.1 | 1,015.2 | −.7 | 40.6 | +11.5 | 83 | 29 | 53 | 8 | 5 | 28 | 49 | 757 | 29 | 72 | 1.60 | −1.4 | .88 | 9 | 7.9 | nw. | 33 | n. | 24 | 8 | 10 | 13 | 6.1 | 2.1 | .0 | 1 |
| Burlington [1] | 403 | 5 | 51 | 999.3 | 1,014.9 | −1.0 | 39.6 | +10.5 | 80 | 29 | 50 | 10 | 8 | 29 | 39 | 789 | 31 | 76 | 1.91 | −.1 | .58 | 11 | 10.1 | s. | 42 | s. | 6 | 7 | 9 | 15 | 6.4 | .1 | .0 | 2 |
| Boston [1] | 124 | 33 | 62 | 1,010.2 | 1,015.2 | +.3 | 46.3 | +10.7 | 86 | 29 | 55 | 24 | 8 | 38 | 36 | 585 | 32 | 66 | 1.90 | −1.7 | .69 | 14 | 12.1 | nw. | 42 | ne. | 22 | 9 | 11 | 11 | 5.8 | .6 | .0 | 2 |
| Nantucket | 12 | 11 | 59 | 1,014.6 | 1,015.6 | +.4 | 42.8 | +7.3 | 62 | 30 | 49 | 28 | 12 | 36 | 19 | 691 | 36 | 86 | 1.84 | −1.9 | .72 | 13 | 11.3 | sw. | 26 | ne. | 7 | 12 | 8 | 11 | 5.4 | 1.6 | .0 | 0 |
| Block Island | 26 | 11 | 46 | 1,013.9 | 1,015.6 | +.4 | 42.6 | +7.2 | 66 | 30 | 49 | 27 | 8 | 36 | 21 | 692 | 36 | 83 | 1.61 | −2.2 | .65 | 9 | 14.9 | sw. | 36 | ne. | 22 | 14 | 8 | 9 | 5.0 | .3 | .0 | 0 |
| Providence [2] | 159 | 46 | 60 | 1,009.5 | 1,015.9 | +.7 | 48.0 | +12.3 | 90 | 29 | 57 | 25 | 8 | 39 | 36 | 538 | 32 | 71 | 2.21 | −1.3 | .95 | 11 | 8.9 | sw. | 33 | nw. | 31 | 11 | 7 | 13 | 5.7 | 1.4 | .0 | 3 |
| Hartford [1] | 159 | 5 | 44 | ----- | 1,015.9 | +.3 | 46.2 | +11.2 | 86 | 29 | 58 | 20 | 5 | 35 | --- | 589 | 34 | 72 | 2.52 | −1.4 | .71 | 13 | 9.3 | s. | 26 | n. | 24 | 10 | 11 | 10 | ---- | 2.9 | .0 | 4 |
| New Haven [1] | 107 | 5 | 39 | 1,011.9 | 1,016.3 | +.7 | 44.0 | +9.5 | 72 | 29 | 54 | 23 | 12 | 34 | 29 | 653 | 34 | 76 | 2.98 | −.8 | 1.06 | 15 | 6.8 | sw. | 23 | n. | 22 | 9 | 12 | 10 | 5.3 | .9 | .0 | 2 |
| **Middle Atlantic** | | | | | | | **52.6** | **+12.2** | | | | | | | | | | **70** | **1.70** | **−1.7** | | | | | | | | | | | **5.4** | | | |
| Albany [1] | 97 | 26 | 40 | 1,011.9 | 1,015.6 | −.7 | 43.8 | +14.0 | 85 | 28 | 55 | 15 | 8 | 33 | 44 | 664 | 32 | 72 | 1.27 | −1.4 | .60 | 11 | 10.0 | s. | 38 | w. | 31 | 12 | 6 | 13 | 5.6 | .7 | .0 | 0 |
| Binghamton [2] | 871 | 60 | 79 | 983.7 | 1,016.3 | −.3 | 45.7 | +13.1 | 83 | 29 | 57 | 17 | 8 | 34 | 41 | 597 | 34 | 78 | 2.84 | +.2 | 1.45 | 15 | 5.6 | w. | 32 | sw. | 31 | 9 | 11 | 11 | 5.7 | 3.6 | .0 | 3 |
| New York | 314 | 415 | 454 | 1,004.1 | 1,015.9 | .0 | 51.0 | +13.3 | 84 | 29 | 60 | 24 | 8 | 42 | 30 | 453 | 35 | 60 | 2.23 | −1.4 | .63 | 12 | 13.8 | sw. | 54 | nw. | 31 | 11 | 8 | 12 | 5.3 | .1 | .0 | 3 |
| Harrisburg [1] | 374 | 30 | 49 | 1,002.4 | 1,016.6 | −.3 | 52.0 | +13.1 | 86 | 29 | 64 | 29 | 8 | 40 | 38 | 413 | 38 | 70 | 1.95 | −1.1 | .85 | 15 | 7.8 | se. | 41 | s. | 31 | 10 | 8 | 13 | 5.7 | T | .0 | 3 |
| Philadelphia [1] | 114 | 5 | 57 | 1,012.2 | 1,016.9 | +.3 | 51.2 | +12.1 | 87 | 29 | 63 | 28 | 8 | 40 | 37 | 439 | 39 | 72 | 1.72 | −1.7 | .49 | 11 | 8.1 | sw. | 37 | sw. | 31 | 11 | 8 | 12 | 5.6 | .0 | .0 | 2 |
| Reading | 323 | 47 | 306 | 1,004.4 | 1,016.9 | ---- | 52.4 | +11.8 | 86 | 29 | 64 | 28 | 8 | 41 | 33 | 411 | ---- | --- | 2.19 | −1.3 | .67 | 14 | 10.9 | nw. | 42 | w. | 31 | 13 | 6 | 12 | 5.1 | .0 | .0 | 2 |
| Scranton | 805 | 72 | 104 | 986.8 | 1,016.9 | +.3 | 47.8 | +12.1 | 83 | 28 | 59 | 20 | 8 | 37 | 38 | 530 | ---- | --- | 2.15 | −1.0 | .52 | 12 | 6.3 | n. | 26 | sw. | 31 | 12 | 11 | 8 | 5.1 | T | .0 | 4 |
| Atlantic City | 52 | 37 | 172 | 1,014.6 | 1,016.9 | +.3 | 49.2 | +10.6 | 77 | 30 | 57 | 28 | 8 | 41 | 29 | 489 | 40 | 78 | .99 | −2.6 | .45 | 10 | 15.9 | s. | 40 | s. | 31 | 10 | 8 | 13 | 5.7 | T | .0 | 1 |
| Trenton | 190 | 89 | 107 | 1,009.1 | 1,016.6 | ----- | 51.8 | +12.7 | 86 | 29 | 62 | 26 | 8 | 41 | 32 | 430 | 37 | 64 | 1.76 | −1.6 | .48 | 11 | 9.0 | s. | 34 | s. | 31 | 10 | 9 | 12 | 5.7 | T | .0 | 2 |
| Baltimore [2] | 123 | 100 | 215 | 1,012.2 | 1,016.9 | .0 | 55.7 | +13.4 | 90 | 29 | 66 | 33 | 1 | 46 | 32 | 339 | 40 | 68 | 1.41 | −2.3 | .64 | 13 | 9.1 | s. | 38 | sw. | 31 | 12 | 12 | 7 | 4.9 | .0 | .0 | 3 |
| Washington [2] | 112 | 56 | 100 | 1,012.5 | 1,017.3 | .0 | 56.2 | +13.6 | 89 | 29 | 68 | 32 | 5 | 45 | 35 | 329 | 40 | 62 | 0.84 | −2.9 | .19 | 13 | 7.1 | s. | 29 | nw. | 17 | 10 | 11 | 10 | 5.3 | T | .0 | 1 |
| Cape Henry | 18 | 8 | 54 | 1,016.6 | 1,018.0 | ----- | 57.6 | +11.0 | 90 | 17 | 68 | 34 | 8 | 48 | 37 | 292 | 46 | 76 | 1.57 | −2.3 | .69 | 5 | 11.6 | sw. | 42 | nw. | 1 | 10 | 14 | 7 | 5.1 | .0 | .0 | 0 |
| Lynchburg [1] | 686 | 4 | 50 | 992.6 | 1,017.6 | .0 | 56.6 | +9.3 | 87 | 17 | 68 | 31 | 1 | 45 | 36 | 302 | 42 | 66 | 1.96 | −1.6 | .99 | 8 | 9.1 | sw. | 32 | sw. | 21 | 9 | 12 | 10 | 5.8 | .0 | .0 | 1 |
| Norfolk [2] | 91 | 80 | 125 | 1,014.9 | 1,018.6 | +1.7 | 59.5 | +11.3 | 89 | 17 | 70 | 36 | 1 | 49 | 32 | 248 | 46 | 74 | 1.30 | −2.5 | .47 | 7 | 10.4 | sw. | 30 | sw. | 6 | 10 | 13 | 8 | 5.5 | .0 | .0 | 1 |
| Richmond | 144 | 11 | 52 | 1,011.9 | 1,017.3 | .0 | 58.6 | +11.4 | 89 | 17 | 70 | 32 | 1 | 47 | 35 | 268 | 44 | 68 | 1.39 | −2.3 | .44 | 7 | 8.9 | sw. | 34 | sw. | 31 | 11 | 9 | 11 | 5.1 | .0 | .0 | 1 |
| **South Atlantic** | | | | | | | **62.8** | **+9.7** | | | | | | | | | | **76** | **1.61** | **−2.2** | | | | | | | | | | | **4.9** | | | |
| Asheville | 2,253 | 77 | 92 | 938.7 | 1,018.3 | +.3 | 57.0 | +12.1 | 85 | 17 | 69 | 30 | 1 | 45 | 38 | 269 | 43 | 71 | 3.55 | −.4 | 1.66 | 9 | 9.1 | se. | 31 | nw. | 22 | 9 | 9 | 13 | 6.0 | .0 | .0 | 4 |
| Charlotte [2] | 779 | 63 | 86 | 990.2 | 1,018.6 | +1.0 | 61.6 | +11.2 | 90 | 17 | 72 | 37 | 1 | 51 | 35 | 177 | 48 | 72 | 2.72 | −1.4 | 1.48 | 9 | 8.0 | sw. | 26 | sw. | 6 | 8 | 14 | 9 | 5.6 | .0 | .0 | 2 |
| Greensboro [1] | 886 | 6 | 56 | 986.1 | 1,018.3 | ----- | 58.4 | +11.3 | 90 | 17 | 70 | 33 | 10 | 47 | 38 | 249 | 46 | 75 | 1.93 | −2.4 | .61 | 9 | 8.8 | sw. | 31 | sw. | 6 | 7 | 13 | 11 | 5.9 | .0 | .0 | 2 |
| Hatteras | 11 | 5 | 50 | 1,018.0 | 1,019.0 | +1.7 | 57.0 | +5.0 | 75 | 28 | 64 | 36 | 10 | 50 | 25 | 258 | 51 | 87 | 1.22 | −3.0 | .42 | 7 | 13.6 | sw. | 33 | w. | 22 | 9 | 12 | 10 | 5.0 | .0 | .0 | 2 |
| Raleigh [1] | 376 | 5 | 69 | 1,004.4 | 1,018.3 | +.7 | 61.0 | +10.8 | 91 | 17 | 72 | 36 | 1 | 50 | 34 | 208 | 47 | 72 | 1.36 | −2.5 | .62 | 7 | 8.7 | sw. | 35 | sw. | 6 | 14 | 11 | 6 | 4.4 | .0 | .0 | 1 |
| Wilmington | 72 | 73 | 107 | 1,016.6 | 1,019.3 | +1.7 | 62.6 | +9.3 | 85 | 17 | 72 | 40 | 9 | 53 | 32 | 149 | 54 | 80 | .26 | −2.9 | .18 | 6 | 10.8 | sw. | 32 | nw. | 22 | 10 | 17 | 4 | 4.6 | T | .0 | 1 |
| Charleston [2] | 48 | 11 | 92 | 1,017.3 | 1,019.3 | +1.3 | 65.7 | +8.3 | 83 | 24 | 73 | 46 | 22 | 58 | 23 | 77 | 54 | 83 | 1.07 | −2.0 | .59 | 2 | 10.2 | s. | 27 | w. | 21 | 15 | 11 | 5 | 4.0 | .0 | .0 | 1 |
| Columbia, S. C. | 347 | 70 | 91 | 1,005.8 | 1,018.6 | +.6 | 64.8 | +9.6 | 90 | 17 | 76 | 40 | 11 | 54 | 34 | 116 | 53 | 75 | 1.80 | −1.6 | .95 | 7 | 8.7 | s. | 29 | sw. | 6 | 12 | 11 | 8 | 4.8 | .0 | .0 | 1 |
| Greenville, S. C. | 1,040 | 18 | 36 | 981.0 | 1,018.3 | ----- | 60.6 | +10.7 | 85 | 17 | 70 | 39 | 22 | 51 | 35 | 183 | 47 | 70 | 3.50 | −1.6 | 1.86 | 9 | 8.4 | sw. | 30 | sw. | 21 | 11 | 10 | 10 | 5.4 | .0 | .0 | 1 |
| Augusta [2] | 182 | 62 | 77 | 1,011.9 | 1,018.3 | +.3 | 65.8 | +9.8 | 90 | 17 | 78 | 40 | 11 | 54 | 38 | 84 | 50 | 66 | 1.07 | −3.0 | .46 | 6 | 6.0 | s. | 22 | w. | 20 | 9 | 10 | 12 | 5.6 | .0 | .0 | 3 |
| Savannah [2] | 65 | 73 | 152 | 1,016.9 | 1,019.3 | +1.3 | 68.4 | +9.4 | 89 | 17 | 78 | 46 | 10 | 59 | 33 | 47 | 55 | 82 | .76 | −2.3 | .65 | 3 | 11.3 | s. | 32 | w. | 21 | 15 | 12 | 4 | 3.9 | .0 | .0 | 1 |
| Jacksonville [2] | 43 | 86 | 110 | 1,018.0 | 1,020.0 | +2.0 | 71.3 | +8.7 | 89 | 16 | 81 | 47 | 10 | 62 | 33 | 15 | 57 | 76 | .12 | −2.8 | .10 | 2 | 8.1 | s. | 28 | w. | 6 | 20 | 9 | 2 | 3.4 | .0 | .0 | 1 |
| **Florida Peninsula** | | | | | | | **74.5** | **+4.6** | | | | | | | | | | **77** | **0.31** | **−1.8** | | | | | | | | | | | **3.5** | | | |
| Key West [2] | 21 | 10 | 64 | 1,018.0 | 1,018.6 | +1.0 | 77.2 | +4.6 | 84 | 16 | 82 | 65 | 23 | 73 | 16 | 0 | 66 | 76 | .04 | −1.4 | .04 | 1 | 11.3 | e. | 23 | nw. | 21 | 22 | 8 | 1 | 2.8 | .0 | .0 | 0 |
| Miami [2] | 25 | 242 | 249 | 1,018.3 | 1,019.3 | +.7 | 73.2 | +2.9 | 81 | 21 | 77 | 51 | 23 | 70 | 21 | 3 | 62 | 76 | .70 | −1.9 | .60 | 4 | 14.1 | se. | 30 | e. | 29 | 20 | 9 | 2 | 3.6 | .0 | .0 | 0 |
| Tampa [1] | 35 | 6 | 43 | 1,018.3 | 1,019.6 | +1.3 | 73.2 | +6.4 | 91 | 16 | 83 | 53 | 23 | 64 | 25 | 1 | 62 | 79 | .20 | −2.2 | .20 | 1 | 9.5 | sw. | 34 | sw. | 21 | 14 | 16 | 1 | 4.0 | .0 | .0 | 1 |
| **East Gulf** | | | | | | | **65.6** | **+7.8** | | | | | | | | | | **77** | **3.84** | **−1.3** | | | | | | | | | | | **5.8** | | | |
| Atlanta [1] | 1,173 | 33 | 72 | 976.6 | 1,018.3 | +.3 | 61.8 | +9.8 | 86 | 17 | 73 | 34 | 1 | 50 | 33 | 159 | 48 | 70 | 2.87 | −2.5 | 1.23 | 9 | 10.4 | nw. | 34 | nw. | 21 | 8 | 10 | 13 | 6.3 | .0 | .0 | 1 |
| Macon [2] | 370 | 79 | 87 | 1,004.7 | 1,018.3 | +.3 | 65.0 | +8.3 | 88 | 17 | 77 | 36 | 10 | 53 | 37 | 95 | 50 | 68 | 1.96 | −3.0 | 1.04 | 5 | 6.8 | s. | 24 | nw. | 21 | 9 | 8 | 14 | 5.9 | .0 | .0 | 0 |
| Thomasville | 273 | 49 | 58 | 1,009.1 | 1,019.6 | +1.6 | 67.2 | +7.0 | 88 | 18 | 81 | 40 | 2 | 53 | 40 | 27 | ---- | --- | 2.48 | −1.6 | 1.96 | 4 | ---- | ---- | ---- | ---- | ---- | 6 | 14 | 11 | ---- | .0 | .0 | 0 |
| Apalachicola | 35 | 11 | 51 | 1,017.3 | 1,018.6 | ----- | 68.4 | +6.8 | 81 | 7 | 75 | 49 | 22 | 62 | 24 | 23 | 61 | 84 | .75 | −3.5 | .57 | 3 | 8.5 | se. | 38 | se. | 26 | 14 | 10 | 7 | 4.5 | .0 | .0 | 3 |
| Pensacola | 56 | 54 | 79 | 1,016.3 | 1,018.6 | +.6 | 67.8 | +7.5 | 80 | 5 | 75 | 46 | 1 | 61 | 27 | 38 | 59 | 81 | 3.01 | −1.8 | 1.83 | 4 | 8.6 | se. | 26 | se. | 25 | 10 | 9 | 12 | 5.5 | .0 | .0 | 4 |
| Anniston | 741 | 9 | ---- | ----- | ----- | ----- | 62.8 | +8.7 | 87 | 17 | 74 | 32 | 1 | 51 | 41 | 137 | ---- | --- | 5.36 | −.3 | 1.63 | 9 | ---- | se. | ---- | ---- | ---- | 14 | 8 | 9 | ---- | .0 | .0 | 2 |
| Birmingham [1] | 700 | 5 | 62 | 992.6 | 1,018.0 | .0 | 61.8 | +8.0 | 85 | 16 | 73 | 31 | 1 | 50 | 38 | 162 | 52 | 76 | 5.86 | ----- | 2.20 | 12 | 9.0 | s. | 34 | e. | 26 | 5 | 14 | 12 | 6.2 | .0 | .0 | 6 |
| Mobile [2] | 57 | 86 | 161 | 1,015.9 | 1,018.3 | +.3 | 67.3 | +7.6 | 81 | 4 | 75 | 43 | 1 | 59 | 30 | 49 | 58 | 82 | 2.36 | −3.6 | .86 | 6 | 7.1 | s. | 25 | e. | 30 | 10 | 10 | 11 | 5.6 | .0 | .0 | 3 |
| Montgomery [2] | 218 | 92 | 105 | 1,010.2 | 1,018.3 | +.3 | 66.4 | +8.6 | 87 | 18 | 77 | 39 | 1 | 56 | 31 | 82 | 54 | 78 | 2.73 | −3.3 | .78 | 9 | 7.4 | s. | 25 | se. | 25 | 8 | 14 | 9 | 5.6 | .0 | .0 | 3 |
| Meridian [2] | 375 | 67 | 92 | 1,003.7 | 1,017.3 | −.3 | 64.2 | +7.1 | 86 | 16 | 75 | 34 | 10 | 53 | 36 | 125 | 54 | 78 | 8.69 | +3.5 | 2.55 | 10 | 7.2 | s. | 29 | sw. | 30 | 7 | 11 | 13 | 5.6 | .0 | .0 | 6 |
| Vicksburg [2] | 247 | 82 | 102 | 1,007.1 | 1,016.3 | −1.0 | 64.5 | +6.0 | 85 | 16 | 74 | 36 | 1 | 55 | 30 | 111 | 54 | 80 | 9.52 | +4.0 | 2.51 | 11 | 9.7 | s. | 26 | nw. | 25 | 6 | 7 | 18 | 6.7 | .0 | .0 | 9 |
| New Orleans [4] | 53 | 50 | 84 | 1,014.9 | 1,016.6 | −.7 | 69.5 | +7.7 | 86 | 17 | 78 | 50 | 1 | 62 | 25 | 20 | 60 | 76 | 2.49 | −2.2 | 1.34 | 5 | 7.5 | se. | 20 | se. | 24 | 8 | 8 | 15 | 6.3 | .0 | .0 | 2 |
| **West Gulf** | | | | | | | **65.7** | **+5.8** | | | | | | | | | | **78** | **6.31** | **+3.4** | | | | | | | | | | | **6.6** | | | |
| Shreveport [1] | 249 | 5 | 64 | 1,005.8 | 1,014.6 | −2.0 | 64.0 | +6.7 | 85 | 18 | 74 | 36 | 7 | 54 | 32 | 105 | 54 | 76 | 11.99 | +7.9 | 5.43 | 16 | 11.2 | se. | 36 | w. | 25 | 8 | 4 | 19 | 6.6 | .0 | .0 | 12 |
| Fort Smith | 463 | 57 | 82 | 997.0 | 1,012.9 | −3.4 | 58.4 | +5.8 | 84 | 27 | 68 | 28 | 7 | 49 | 35 | 233 | 48 | 71 | 13.03 | +10.0 | 3.68 | 14 | 8.9 | e. | 36 | sw. | 15 | 8 | 8 | 15 | 6.2 | .0 | .0 | 14 |
| Little Rock [1] | 357 | 26 | 58 | 1,002.0 | 1,014.9 | −2.0 | 59.6 | +6.6 | 85 | 16 | 69 | 30 | 7 | 50 | 36 | 215 | 49 | 76 | 6.99 | +2.4 | 1.83 | 17 | 9.5 | s. | 35 | se. | 23 | 11 | 1 | 19 | 6.3 | .0 | .0 | 12 |
| Austin [1] | 605 | 10 | 41 | 991.2 | 1,012.5 | ----- | 65.8 | +5.1 | 84 | 26 | 76 | 41 | 7 | 56 | 39 | 56 | 55 | 72 | 4.98 | +2.7 | 1.50 | 13 | 10.3 | s. | 32 | s. | 14 | 5 | 9 | 17 | 6.9 | .0 | .0 | 12 |
| Brownsville [1] | 57 | 5 | 54 | 1,008.8 | 1,010.8 | ----- | 74.8 | +6.6 | 98 | 24 | 83 | 48 | 21 | 66 | 32 | 2 | 66 | 82 | .20 | −1.4 | .18 | 3 | 14.3 | se. | 34 | s. | 23 | 5 | 11 | 15 | 6.6 | .0 | .0 | 1 |
| Corpus Christi [1] | 20 | 4 | 33 | 1,011.2 | 1,011.9 | −3.3 | 71.2 | +8.2 | 94 | 24 | 79 | 48 | 21 | 64 | 32 | 14 | 63 | 84 | 4.01 | ----- | 2.13 | 6 | 15.5 | se. | 38 | w. | 31 | 5 | 9 | 17 | 6.9 | .0 | .0 | 5 |
| Dallas [1] | 512 | 5 | 45 | 994.6 | 1,012.9 | ----- | 62.1 | +4.7 | 85 | 26 | 72 | 33 | 7 | 52 | 35 | 133 | 53 | 77 | 9.53 | +6.6 | 5.33 | 14 | 11.9 | s. | 43 | w. | 19 | 9 | 4 | 18 | 6.3 | .0 | .0 | 12 |
| Fort Worth [1] | 679 | 40 | 56 | 988.8 | 1,012.9 | −2.3 | 61.6 | +4.9 | 84 | 26 | 71 | 34 | 7 | 52 | 36 | 146 | 51 | 72 | 6.19 | +3.9 | 2.61 | 14 | 12.0 | s. | 45 | sw. | 14 | 9 | 5 | 17 | 6.2 | .0 | .0 | 10 |
| Galveston [2] | 54 | 106 | 114 | 1,012.2 | 1,013.9 | −2.4 | 67.5 | +5.1 | 76 | 18 | 72 | 48 | 7 | 64 | 17 | 24 | 62 | 86 | 3.60 | +.9 | 4.05 | 8 | 12.9 | se. | 30 | nw. | 25 | 5 | 6 | 20 | 7.0 | .0 | .0 | 6 |
| Houston [2] | 138 | 157 | 190 | 1,008.8 | 1,013.9 | ----- | 68.8 | +5.5 | 87 | 15 | 76 | 43 | 7 | 61 | 27 | 28 | 61 | 84 | 2.98 | −.5 | 3.65 | 13 | 12.9 | se. | 36 | se. | 30 | 5 | 7 | 19 | 7.0 | .0 | .0 | 3 |
| Palestine | 510 | 64 | 72 | 995.9 | 1,014.2 | −1.7 | 65.0 | +5.9 | 84 | 16 | 74 | 35 | 7 | 56 | 34 | 71 | 54 | 72 | 9.31 | +5.8 | 2.69 | 19 | 9.1 | s. | 25 | nw. | 6 | 8 | 6 | 17 | 6.4 | .0 | .0 | 12 |
| Port Arthur | 34 | 59 | 134 | 1,013.2 | 1,014.6 | ----- | 68.2 | +6.3 | 82 | 12 | 75 | 44 | 7 | 62 | 26 | 32 | 60 | 86 | 4.23 | +1.0 | 7.08 | 8 | 16.5 | s. | 43 | w. | 30 | 8 | 5 | 18 | 6.7 | .0 | .0 | 5 |
| San Antonio [1] | 693 | 8 | 51 | 987.8 | 1,012.2 | −3.0 | 67.2 | +4.4 | 86 | 16 | 78 | 40 | 21 | 57 | 44 | 44 | 56 | 72 | 2.73 | +.9 | 1.08 | 13 | 10.4 | se. | 37 | n. | 29 | 4 | 9 | 18 | 7.3 | .0 | .0 | 10 |
| **Ohio Valley and Tennessee** | | | | | | | **54.7** | **+11.4** | | | | | | | | | | **75** | **6.61** | **+2.4** | | | | | | | | | | | **6.2** | | | |
| Chattanooga [1] | 762 | 6 | 66 | 990.2 | 1,017.6 | −.4 | 59.9 | +10.8 | 84 | 19 | 72 | 30 | 11 | 48 | 43 | 197 | 50 | 76 | 3.18 | −2.6 | 1.67 | 9 | 8.5 | s. | 36 | sw. | 6 | 5 | 11 | 15 | 6.6 | .0 | .0 | 1 |
| Knoxville [1] | 995 | 27 | 53 | 982.4 | 1,018.6 | +.6 | 59.0 | +11.5 | 86 | 25 | 71 | 31 | 9 | 47 | 39 | 224 | 47 | 74 | 3.29 | −1.8 | 1.32 | 12 | 8.8 | sw. | 38 | sw. | 6 | 7 | 9 | 15 | 6.2 | .0 | .0 | 2 |
| Memphis [4] | 399 | 5 | 86 | 1,001.0 | 1,015.6 | −1. | 760. | +8.2 | 84 | 24 | 70 | 32 | 9 | 50 | 35 | 210 | 51 | 76 | 7.03 | +1.8 | 1.42 | 13 | 8.8 | s. | 25 | nw. | 21 | 8 | 4 | 19 | 6.5 | .0 | .0 | 3 |

See footnotes at end of table.

## CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS

| District and station | Elevation of instruments: Barometer above sea level | Elevation of instruments: Thermometer above ground | Elevation of instruments: Anemometer above ground | Pressure: Station | Pressure: Sea level | Pressure: Departure from normal | Temperature of the air: Mean | Temperature of the air: Departure from normal | Temperature of the air: Maximum | Temperature of the air: Date | Temperature of the air: Mean maximum | Temperature of the air: Minimum | Temperature of the air: Date | Temperature of the air: Mean minimum | Temperature of the air: Greatest daily range | Total degree days | Mean temperature of the dew-point | Mean relative humidity | Precipitation: Total | Precipitation: Departure from normal | Precipitation: Greatest in 24 hours | Precipitation: Days with 0.01 inch or more | Wind: Average hourly velocity | Wind: Prevailing direction | Wind: Maximum velocity: Miles per hour | Wind: Maximum velocity: Direction | Wind: Maximum velocity: Date | Clear days | Partly cloudy days | Cloudy days | Average cloudiness, tenths | Total snowfall | Snow, sleet, and ice on ground at end of month | Number of days with thunderstorms |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ohio Valley and Tennessee—Con.** | *Ft.* | *Ft.* | *Ft.* | *Mbs.* | *Mbs.* | *Mbs.* | *°F* | *F* | *°F* | | *°F* | *°F* | | *°F* | *°F* | | *°F* | *%* | *In.* | *In.* | *In.* | | *Mi.* | | | | | | | | 0–10 | *In.* | *In.* | |
| | | | | | | | **54.7** | **+11.4** | | | | | | | | | | **75** | **6.61** | **+2.4** | | | | | | | | | | | **6.2** | | | |
| Nashville [1] | 546 | 5 | 72 | 996.6 | 1,016.6 | −1. | 059. | 1+0.9 | 83 | 16 | 69 | 29 | 9 | 49 | 36 | 234 | 48 | 71 | 1.72 | −3.4 | .55 | 12 | 10.7 | s. | 46 | s. | 26 | 6 | 8 | 17 | 6.6 | .0 | .0 | 1 |
| Lexington | 989 | 4 | 28 | 979.3 | 1,016.9 | −.7 | 54.4 | +10.7 | 83 | 25 | 65 | 26 | 9 | 44 | 33 | 345 | 45 | 76 | 5.56 | +1.2 | 1.31 | 12 | ---- | s. | ---- | ---- | -- | 6 | 7 | 18 | 6.7 | .0 | .0 | 6 |
| Louisville [2] | 525 | 106 | 120 | 997.0 | 1,015.9 | −.7 | 57.0 | +11.6 | 84 | 16 | 66 | 31 | 1 | 48 | 33 | 291 | 44 | 74 | 10.23 | +5.8 | 3.02 | 14 | 9.7 | s. | 37 | w. | 6 | 10 | 9 | 12 | 5.6 | .0 | .0 | 6 |
| Evansville [1] | 431 | 11 | 40 | 999.7 | 1,015.6 | −.7 | 54.5 | +10.1 | 83 | 16 | 64 | 27 | 9 | 44 | 33 | 339 | 45 | 74 | 11.43 | +7.2 | 3.92 | 15 | 9.1 | s. | 36 | w. | 17 | 7 | 8 | 16 | 6.4 | T | .0 | 7 |
| Indianapolis [1] | 823 | 5 | 54 | 985.1 | 1,015.2 | −2.1 | 51.2 | +12.4 | 79 | 16 | 62 | 23 | 1 | 40 | 33 | 433 | 42 | 78 | 7.76 | ----- | 1.88 | 13 | 11.1 | sw. | 35 | sw. | 2 | 9 | 5 | 17 | 6.3 | T | .0 | 3 |
| Terre Haute [2] | 575 | 68 | 149 | 994.2 | 1,015.6 | ----- | 53.5 | +11.8 | 81 | 16 | 63 | 28 | 1 | 44 | 30 | 372 | 42 | 78 | 8.39 | +4.6 | 2.07 | 15 | 10.9 | s. | 31 | sw. | 17 | 8 | 9 | 14 | 6.0 | T | .0 | 7 |
| Cincinnati [2] | 627 | 11 | 51 | 993.2 | 1,016.3 | −1.3 | 54.6 | +13.7 | 86 | 25 | 64 | 28 | 9 | 45 | 33 | 347 | 44 | 74 | 10.94 | +7.0 | 3.67 | 14 | 8.0 | s. | 25 | sw. | 31 | 9 | 7 | 15 | 6.0 | T | .0 | 7 |
| Columbus [2] | 822 | 90 | 110 | 986.1 | 1,015.9 | −1.4 | 51.4 | +12.3 | 83 | 25 | 61 | 27 | 8 | 42 | 30 | 432 | 42 | 76 | 8.08 | +4.6 | 3.20 | 15 | 10.4 | s. | 48 | sw. | 17 | 10 | 4 | 17 | 6.2 | T | .0 | 4 |
| Dayton [1] | 1,003 | 6 | 55 | 979.3 | 1,016.3 | ----- | 50.6 | +11.9 | 80 | 25 | 60 | 25 | 9 | 41 | 32 | 453 | 41 | 76 | 7.05 | +3.4 | 2.47 | 15 | 12.4 | s. | 43 | sw. | 31 | 9 | 2 | 20 | 6.6 | T | .0 | 5 |
| Elkins [1] | 1,947 | 4 | 45 | 947.9 | 1,017.6 | .0 | 50.0 | +10.9 | 83 | 25 | 64 | 22 | 13 | 36 | 50 | 467 | 40 | 77 | 4.50 | +.7 | 1.22 | 13 | 7.8 | nw. | 36 | w. | 17 | 7 | 9 | 15 | 6.5 | 3.2 | .0 | 3 |
| Parkersburg | 637 | 77 | 84 | 993.6 | 1,016.9 | −.7 | 53.8 | +11.0 | 86 | 25 | 65 | 27 | 9 | 42 | 38 | 374 | 42 | 73 | 5.12 | +1.6 | 1.87 | 12 | 6.8 | se. | 25 | w. | 31 | 11 | 8 | 12 | 5.6 | T | .0 | 3 |
| Pittsburgh [1] | 842 | 39 | 54 | 985.4 | 1,016.6 | −.7 | 51.2 | +14.0 | 81 | 26 | 62 | 22 | 8 | 40 | 35 | 447 | 38 | 69 | 5.97 | +2.9 | 2.60 | 16 | 10.4 | sw. | 44 | w. | 31 | 9 | 11 | 11 | 5.7 | 1.3 | .0 | 4 |
| **Lower Lakes** | | | | | | | **45.8** | **+13.4** | | | | | | | | | | **77** | **4.01** | **+1.3** | | | | | | | | | | | **5.8** | | | |
| Buffalo [1] | 768 | 34 | 96 | 986.8 | 1,015.9 | − .7 | 44.4 | +13.1 | 81 | 26 | 53 | 18 | 1 | 35 | 36 | 641 | 35 | 78 | 4.26 | +1.7 | 1.19 | 15 | 13.9 | sw. | 51 | nw. | 31 | 8 | 11 | 12 | 6.1 | 5.8 | .0 | 2 |
| Canton | 448 | 10 | 61 | 997.6 | 1,014.2 | ----- | 40.2 | +12.4 | 80 | 28 | 50 | 12 | 4 | 31 | 37 | 767 | 32 | 74 | 2.51 | .0 | 1.12 | 12 | 9.8 | sw. | 29 | w. | 17 | 6 | 10 | 15 | 6.5 | 2.1 | .0 | 2 |
| Oswego | 335 | 71 | 85 | 1,002.7 | 1,015.6 | −.7 | 42.8 | +11.7 | 83 | 28 | 51 | 20 | 8 | 34 | 33 | 687 | 32 | 70 | 2.43 | −.2 | 1.07 | 11 | 9.3 | s. | 29 | w. | 31 | 11 | 9 | 11 | 5.5 | 1.5 | .0 | 3 |
| Rochester [1] | 523 | 5 | 69 | 995.9 | 1,015.9 | −.7 | 43.8 | +14.0 | 84 | 26 | 54 | 17 | 1 | 34 | 41 | 660 | 34 | 78 | 3.87 | +1.1 | 1.67 | 14 | 10.7 | sw. | 49 | nw. | 31 | 7 | 12 | 12 | 6.0 | 5.4 | .0 | 3 |
| Syracuse [1] | 596 | 5 | 57 | 993.2 | 1,015.6 | −1.0 | 44.4 | +14.7 | 84 | 28 | 55 | 19 | 5 | 34 | 43 | 639 | 34 | 74 | 3.06 | −.2 | 1.52 | 15 | 10.2 | sw. | 52 | sw. | 31 | 9 | 7 | 15 | 6.2 | 1.5 | .0 | 2 |
| Erie [2] | 714 | 57 | 81 | 989.5 | 1,015.9 | −.7 | 46.8 | +13.3 | 82 | 28 | 56 | 22 | 8 | 38 | 32 | 574 | 38 | 82 | 4.52 | +1.9 | 1.46 | 13 | 8.2 | sw. | 27 | sw. | 17 | 9 | 11 | 11 | 5.6 | 4.1 | .0 | 3 |
| Cleveland [1] | 762 | 27 | 54 | 987.5 | 1,015.6 | 3 | −.6 | 48.6 | +14.1 | 83 | 25 | 60 | 20 | 8 | 37 | 34 | 519 | 38 | 76 | 4.13 | +1.4 | .92 | 16 | 10.9 | s. | 36 | sw. | 17 | 11 | 6 | 14 | 5.7 | 3.9 | .0 | 4 |
| Sandusky | 629 | 5 | 67 | 992.2 | 1,015.6 | −1.3 | 49.0 | +13.9 | 83 | 25 | 60 | 18 | 8 | 38 | 38 | 503 | ---- | ---- | 5.12 | +2.4 | 1.32 | 16 | 9.8 | sw. | 30 | nw. | 31 | 13 | 3 | 15 | 5.2 | 3.9 | .0 | 3 |
| Toledo [1] | 628 | 5 | 47 | 991.9 | 1,015.2 | −1.7 | 47.7 | +13.9 | 82 | 25 | 60 | 17 | 1 | 35 | 42 | 540 | 38 | 78 | 4.40 | +1.8 | 1.62 | 13 | 13.0 | sw. | 45 | s. | 17 | 16 | 9 | 6 | 4.4 | 4.3 | .0 | 3 |
| Fort Wayne [1] | 857 | 5 | 33 | 983.4 | 1,015.2 | ----- | 47.9 | +11.8 | 78 | 28 | 59 | 18 | 8 | 36 | 33 | 531 | 40 | 81 | 6.26 | +3.0 | 1.97 | 13 | 9.6 | sw. | 38 | w. | 17 | 9 | 5 | 17 | 6.3 | 2.6 | .0 | 4 |
| Detroit [1] | 730 | 5 | 78 | 988.5 | 1,015.6 | −1.3 | 47.9 | +14.9 | 82 | 28 | 59 | 21 | 7 | 37 | 35 | 534 | 37 | 75 | 3.50 | +1.1 | 1.32 | 15 | 10.0 | sw. | 38 | nw. | 17 | 8 | 9 | 14 | 6.1 | .3 | .0 | 2 |
| **Upper Lakes** | | | | | | | **40.9** | **+13.1** | | | | | | | | | | **76** | **1.81** | **−0.3** | | | | | | | | | | | **5.9** | | | |
| Alpena | 609 | 5 | 89 | 991.2 | 1,014.2 | −2.7 | 38.6 | +13.1 | 78 | 28 | 48 | 7 | 4 | 30 | 37 | 816 | 30 | 80 | 1.50 | −.5 | .49 | 11 | 10.0 | se. | 42 | w. | 17 | 8 | 9 | 14 | 6.0 | 5.0 | .0 | 2 |
| Escanaba | 612 | 51 | 72 | 990.2 | 1,013.2 | −4.1 | 34.8 | +10.6 | 62 | 28 | 44 | 0 | 7 | 26 | 32 | 937 | 28 | 82 | 1.25 | −.6 | .47 | 10 | 9.7 | s. | 32 | nw. | 17 | 8 | 12 | 11 | 5.8 | 2.9 | .0 | 5 |
| Grand Rapids [2] | 707 | 70 | 244 | 988.2 | 1,014.2 | −2.7 | 48.2 | +14.8 | 82 | 27 | 58 | 17 | 7 | 38 | 32 | 523 | 36 | 74 | 1.49 | −1.0 | .34 | 11 | 12.7 | sw. | 52 | sw. | 17 | 10 | 12 | 9 | 5.4 | T | .0 | 3 |
| Lansing [2] | 878 | 5 | 90 | 982.4 | 1,014.9 | ----- | 46.4 | +14.2 | 78 | 27 | 58 | 19 | 7 | 35 | 33 | 579 | 35 | 72 | 2.54 | +.2 | .63 | 12 | 9.7 | sw. | 32 | sw. | 17 | 9 | 10 | 12 | 5.8 | T | .0 | 1 |
| Marquette | 734 | 44 | 73 | 984.8 | 1,012.2 | −5.1 | 38.1 | +13.3 | 70 | 27 | 47 | 6 | 7 | 30 | 30 | 833 | 29 | 75 | 1.91 | −.4 | .87 | 12 | 8.3 | n. | 31 | s. | 27 | 8 | 11 | 12 | 6.2 | 4.0 | .0 | 4 |
| Sault Sainte Marie [1] | 614 | 11 | 52 | 990.5 | 1,014.2 | −2.7 | 34.2 | +13.6 | 69 | 27 | 44 | −1 | 7 | 24 | 31 | 957 | 26 | 82 | 1.38 | −.4 | .33 | 10 | 11.2 | e. | 38 | sw. | 28 | 9 | 7 | 15 | 6.0 | 8.6 | .0 | 3 |
| Chicago [1] | 673 | 5 | 36 | 989.2 | 1,014.2 | −2.7 | 48.6 | +14.1 | 82 | 27 | 60 | 22 | 7 | 38 | 35 | 510 | 38 | 74 | 2.29 | −.3 | .59 | 13 | 11.2 | s. | 35 | s. | 27 | 8 | 11 | 12 | 5.7 | 1.0 | .0 | 2 |
| Green Bay | 617 | 90 | 123 | 990.2 | 1,013.2 | −4.1 | 41.1 | +12.5 | 76 | 27 | 50 | 5 | 7 | 32 | 28 | 739 | 30 | 70 | 1.12 | −.9 | .34 | 8 | 10.8 | s. | 34 | sw. | 17 | 9 | 7 | 15 | 6.4 | 4.3 | .0 | 1 |
| Milwaukee [1] | 681 | 33 | 66 | 988.2 | 1,013.5 | −3.4 | 44.4 | +14.3 | 81 | 27 | 54 | 17 | 7 | 34 | 37 | 643 | 36 | 76 | 1.40 | −1.0 | .53 | 10 | 14.9 | sw. | 48 | sw. | 27 | 8 | 8 | 15 | 6.1 | T | .0 | 3 |
| Duluth [2] | 1,133 | 5 | 47 | 969.2 | 1,011.5 | −6.5 | 34.6 | +10.9 | 72 | 22 | 43 | −6 | 6 | 26 | 33 | 940 | 24 | 77 | 3.18 | +1.6 | 1.82 | 10 | 12.2 | nw. | 38 | e. | 15 | 11 | 10 | 10 | 5.5 | 3.1 | .0 | 4 |
| **North Dakota** | | | | | | | **33.8** | **+12.0** | | | | | | | | | | **77** | **1.32** | **+0.5** | | | | | | | | | | | **6.2** | | | |
| Fargo [1] | 940 | 5 | 43 | 975.6 | 1,010.5 | −8.1 | 35.0 | +12.3 | 72 | 22 | 46 | −15 | 6 | 24 | 35 | 928 | 29 | 84 | 1.20 | +.2 | .43 | 8 | 12.2 | s. | 33 | n. | 4 | 9 | 91 | 3 | 5.8 | 1.0 | .0 | 0 |
| Bismarck [1] | 1,677 | 5 | 43 | 948.9 | 1,010.5 | −7.5 | 34.0 | +12.1 | 74 | 21 | 46 | −17 | 6 | 22 | 43 | 959 | 26 | 79 | .98 | +.1 | .44 | 7 | 10.1 | e. | 38 | e. | 23 | 6 | 10 | 15 | 6.4 | 2.5 | .0 | 2 |
| Devils Lake | 1,478 | 11 | 44 | 956.0 | 1,010.5 | −9.1 | 33.1 | +13.3 | 71 | 21 | 43 | −15 | 5 | 24 | 33 | 992 | 26 | 77 | 1.70 | +.9 | 1.22 | 6 | 8.7 | sw. | 26 | nw. | 1 | 8 | 11 | 12 | 6.1 | 4.7 | .0 | 1 |
| Grand Forks [1] | 832 | 4 | 41 | 979.0 | 1,010.2 | ----- | 33.7 | ------ | 69 | 24 | 44 | −10 | 6 | 24 | 37 | 973 | 28 | --- | 1.03 | ------ | .74 | 6 | ---- | s. | ---- | ---- | --- | 5 | 10 | 16 | ---- | 2.3 | .0 | 0 |
| Lemmon, S. Dak. | 2,602 | 6 | 30 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| Williston | 1,878 | 42 | 50 | 941.4 | 1,009.5 | −7.8 | 33.2 | +10.3 | 69 | 21 | 45 | −22 | 5 | 21 | 40 | 986 | 22 | 68 | 1.40 | +.7 | .73 | 7 | 7.8 | s. | 26 | w. | 13 | 8 | 4 | 19 | 6.6 | 2.5 | .0 | 0 |
| **Upper Mississippi** | | | | | | | **47.6** | **+11.7** | | | | | | | | | | **75** | **4.50** | **+2.1** | | | | | | | | | | | **5.7** | | | |
| Minneapolis-St. Paul [1] | 919 | 43 | 74 | 977.0 | 1,011.2 | −6.4 | 39.8 | +10.2 | 71 | 22 | 50 | −2 | 6 | 30 | 33 | 784 | 31 | 78 | 1.95 | +.5 | 1.01 | 11 | 10.6 | se. | 30 | s. | 26 | 11 | 7 | 13 | 5.6 | .7 | .0 | 3 |
| Springfield, Minn. | 1,025 | 4 | 42 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| La Crosse [1] | 714 | 5 | 29 | 985.8 | 1,012.2 | −5.1 | 40.4 | +10.6 | 74 | 27 | 52 | −10 | 7 | 29 | 37 | 765 | 32 | 78 | 3.01 | +1.4 | 1.35 | 10 | 8.9 | s. | 34 | s. | 16 | 12 | 3 | 16 | 5.8 | 6.3 | .0 | 6 |
| Madison [2] | 974 | 70 | 78 | 977.3 | 1,013.2 | −4.1 | 45.2 | +14.6 | 78 | 27 | 55 | 13 | 7 | 36 | 36 | 614 | 34 | 73 | 1.45 | −.6 | .41 | 11 | 9.2 | sw. | 32 | s. | 27 | 11 | 7 | 13 | 5.8 | .4 | .0 | 2 |
| Charles City | 1,015 | 10 | 51 | 975.6 | 1,013.2 | −4.4 | 41.4 | +10.7 | 76 | 27 | 52 | −4 | 7 | 31 | 38 | 729 | ---- | ---- | 4.15 | +2.4 | 1.87 | 8 | 7.1 | se. | 19 | s. | 16 | 15 | 4 | 12 | 4.8 | 7.0 | .0 | 3 |
| Moline [1] | 606 | 6 | 50 | 991.2 | 1,013.5 | −3.4 | 48.8 | +14.0 | 83 | 27 | 60 | 20 | 7 | 38 | 40 | 505 | 38 | 71 | 3.36 | +1.0 | 1.94 | 11 | 11.5 | s. | 38 | s. | 27 | 11 | 7 | 13 | 5.8 | .7 | .0 | 2 |
| Des Moines [2] | 860 | 5 | 99 | 981.4 | 1,012.9 | −4.4 | 47.2 | +11.3 | 78 | 27 | 57 | 12 | 6 | 37 | 34 | 552 | 36 | 72 | 4.80 | +3.0 | 2.49 | 13 | 10.5 | sw. | 34 | sw. | 16 | 13 | 5 | 13 | 5.2 | .9 | .0 | 8 |
| Dubuque | 699 | 60 | 79 | 987.5 | 1,012.9 | −4.4 | 47.0 | +13.0 | 80 | 27 | 58 | 14 | 7 | 36 | 38 | 558 | 36 | 71 | 3.92 | +1.9 | 2.27 | 10 | 6.0 | s. | 20 | nw. | 17 | 10 | 7 | 14 | 5.8 | T | .0 | 5 |
| Burlington [1] | 702 | 4 | 36 | 987.8 | 1,013.5 | −3.4 | 48.2 | +10.3 | 82 | 16 | 60 | 13 | 7 | 37 | 40 | 521 | 38 | 74 | 5.15 | +2.4 | 2.69 | 12 | 11.8 | s. | 36 | sw. | 15 | 11 | 5 | 15 | 6.0 | 2.6 | .0 | 5 |
| Cairo | 357 | 5 | 99 | 1,002.4 | 1,015.2 | −2.1 | 57.4 | +9.7 | 81 | 16 | 66 | 32 | 1 | 48 | 35 | 269 | ---- | ---- | 9.22 | +5.5 | 1.80 | 14 | 9.7 | sw. | 31 | sw. | 15 | 9 | 7 | 15 | 5.9 | .0 | .0 | 7 |
| Peoria [1] | 609 | 6 | 26 | 991.9 | 1,014.6 | −2.3 | 49.4 | +13.4 | 81 | 27 | 60 | 20 | 7 | 39 | 34 | 484 | 40 | 78 | 3.90 | +1.2 | 1.56 | 11 | 11.0 | s. | 34 | sw. | 15 | 10 | 8 | 13 | 5.8 | 2.7 | .0 | 3 |
| Springfield, Ill. [2] | 636 | 5 | 191 | 991.2 | 1,014.2 | −2.7 | 52.3 | +12.1 | 83 | 27 | 62 | 26 | 7 | 42 | 32 | 406 | 42 | 82 | 4.77 | +1.6 | 1.13 | 14 | 13.5 | s. | 34 | s. | 27 | 9 | 8 | 14 | 5.9 | 2.0 | .0 | 5 |
| St. Louis [2] | 568 | 35 | 303 | 993.6 | 1,013.9 | −3.0 | 54.3 | +10.2 | 85 | 16 | 64 | 25 | 7 | 45 | 29 | 357 | 42 | 71 | 8.27 | +4.9 | 1.83 | 14 | 13.6 | s. | 40 | sw. | 16 | 10 | 9 | 12 | 5.5 | T | .0 | 5 |
| **Missouri Valley** | | | | | | | **47.3** | **+9.4** | | | | | | | | | | **70** | **3.37** | **+1.5** | | | | | | | | | | | **5.2** | | | |
| Columbia, Mo. [2] | 784 | 6 | 66 | 985.1 | 1,013.2 | −3.7 | 52.4 | +9.5 | 87 | 16 | 63 | 14 | 7 | 42 | 37 | 410 | 38 | 68 | 6.04 | +3.1 | 1.31 | 10 | 8.7 | s. | 24 | sw. | 27 | 14 | 10 | 7 | 4.4 | 2.6 | .0 | 7 |
| Kansas City [1] | 963 | 39 | 76 | 977.3 | 1,012.2 | −4.4 | 51.8 | +9.1 | 82 | 27 | 62 | 9 | 7 | 41 | 34 | 423 | 38 | 65 | 4.32 | +2.0 | .85 | 12 | 12.0 | s. | 33 | sw. | 27 | 10 | 9 | 12 | 5.7 | 3.2 | .0 | 6 |
| St. Joseph [2] | 967 | 11 | 49 | 977.0 | 1,012.2 | ----- | 50.6 | +10.1 | 81 | 27 | 62 | 10 | 7 | 40 | 31 | 452 | 39 | 70 | 3.84 | +1.4 | 1.44 | 11 | 9.7 | s. | 29 | nw. | 17 | 21 | 4 | 6 | 3.3 | 1.5 | .0 | 3 |
| Springfield, Mo. [1] | 1,324 | 5 | 67 | 966.1 | 1,013.5 | −3.1 | 52.0 | +8.4 | 84 | 16 | 62 | 17 | 7 | 41 | 37 | 414 | 42 | 74 | 8.86 | +5.5 | 2.32 | 15 | 12.2 | se. | 50 | s. | 15 | 11 | 6 | 14 | 5.8 | T | .0 | 10 |
| Topeka | 987 | 65 | 87 | 976.3 | 1,012.2 | ----- | 51.8 | +9.2 | 84 | 27 | 64 | 12 | 7 | 40 | 36 | 420 | 39 | 68 | 4.31 | +2.2 | 2.10 | 10 | 10.0 | s. | 27 | sw. | 23 | 9 | 11 | 11 | 5.5 | 1.8 | .0 | 5 |
| Lincoln [2] | 1,189 | 11 | 81 | 968.2 | 1,011.5 | −5.1 | 48.0 | +10.5 | 78 | 27 | 60 | 6 | 6 | 36 | 34 | 527 | 35 | 72 | 1.45 | +.2 | .89 | 7 | 10.1 | s. | 28 | s. | 23 | 13 | 11 | 7 | 4.7 | .2 | .0 | 3 |
| Omaha [1] | 1,105 | 5 | 68 | 971.6 | 1,011.9 | −5.4 | 46.0 | +9.9 | 79 | 27 | 58 | 3 | 7 | 34 | 36 | 588 | 35 | 70 | 1.53 | +.2 | 1.08 | 7 | 12.6 | s. | 43 | se. | 24 | 14 | 5 | 12 | 5.4 | 1.1 | .0 | 3 |
| Valentine | 2,598 | 46 | 54 | 917.7 | 1,010.5 | −6.4 | 39.4 | +7.1 | 79 | 22 | 53 | −4 | 7 | 26 | 42 | 788 | 26 | 64 | .89 | −.1 | .45 | 8 | 8.6 | w. | 25 | nw. | 31 | 8 | 12 | 11 | 5.8 | 4.9 | .0 | 1 |
| Sioux City [1] | 1,138 | 5 | 40 | 969.5 | 1,011.5 | −6.1 | 42.1 | +10.0 | 75 | 31 | 55 | −2 | 3 | 29 | 38 | 708 | 32 | 75 | 1.58 | +.4 | .81 | 9 | 10.9 | se. | 34 | se. | 24 | 16 | 4 | 11 | 5.0 | 6.4 | .0 | 1 |
| Huron [1] | 1,301 | 5 | 41 | 963.1 | 1,010.8 | −7.2 | 39.0 | +10.1 | 75 | 22 | 52 | −5 | 6 | 27 | 38 | 804 | 28 | 74 | .88 | .0 | .32 | 8 | 12.0 | s. | 40 | se. | 23 | 7 | 13 | 11 | 6.1 | .7 | .0 | 2 |
| **Northern Slope** | | | | | | | **35.8** | **+3.3** | | | | | | | | | | **71** | **1.17** | **+0.2** | | | | | | | | | | | **6.8** | | | |
| Billings [1] | 3,570 | 16 | 40 | 885.2 | 1,010.5 | ----- | 37.6 | +3.6 | 70 | 22 | 49 | −16 | 5 | 26 | 38 | 848 | 25 | 60 | .65 | ------ | .44 | 9 | 12.5 | sw. | 47 | nw. | 31 | 4 | 8 | 19 | 7.3 | 2.6 | .0 | 1 |
| Havre | 2,507 | 11 | 67 | 920.8 | 1,010.8 | −5.1 | 35.2 | +8.1 | 71 | 22 | 47 | −27 | 5 | 23 | 50 | 925 | 22 | 64 | .73 | +.2 | .58 | 4 | 9.8 | sw. | 38 | sw. | 10 | 4 | 12 | 15 | 7.0 | 6.6 | 4.1 | 0 |
| Helena [1] | 4,124 | 5 | 43 | 868.3 | 1,012.5 | −3.8 | 33.4 | +1.7 | 65 | 22 | 46 | −24 | 5 | 21 | 43 | 977 | 22 | 63 | .90 | +.1 | .71 | 7 | 9.8 | w. | 40 | nw. | 31 | 2 | 9 | 20 | 7.5 | 2.5 | .0 | 0 |
| Missoula [1] | 3,205 | 4 | 32 | 897.7 | 1,013.9 | ----- | 34.8 | +1.3 | 59 | 30 | 45 | −6 | 5 | 25 | 32 | 936 | 27 | 74 | .40 | −.4 | .19 | 9 | 7.4 | se. | 33 | nw. | 10 | 1 | 4 | 26 | 8.3 | 3.6 | .0 | 0 |
| Kalispell | 2,973 | 48 | 56 | 907.2 | 1,011.9 | −3.7 | 33.9 | +1.0 | 55 | 27 | 42 | −15 | 5 | 26 | 31 | 963 | 24 | 68 | 1.37 | +.4 | .43 | 16 | 5.5 | w. | 25 | sw. | 10 | 1 | 8 | 22 | 7.9 | 8.9 | T | 0 |
| Miles City [1] | 2,371 | 5 | 78 | 925.5 | 1,010.5 | −6.1 | 36.5 | ------ | 74 | 22 | 49 | −22 | 5 | 24 | 45 | 883 | 24 | 69 | .89 | ------ | .48 | 8 | ---- | w. | ---- | ---- | -- | 6 | 5 | 20 | 7.3 | 1.3 | .0 | 1 |
| Rapid City [1] | 3,259 | 5 | 63 | 895.4 | 1,010.8 | −5.5 | 36.6 | +5.0 | 72 | 22 | 48 | −10 | 5 | 25 | 36 | 880 | 26 | 71 | 3.02 | +2.0 | 2.19 | 11 | 13.3 | nw. | 49 | nw. | 13 | 5 | 14 | 12 | 6.2 | 4.6 | .0 | 1 |
| Cheyenne [1] | 6,094 | 5 | 40 | 806.3 | 1,010.8 | −3.8 | 34.6 | +1.5 | 68 | 21 | 48 | −7 | 5 | 21 | 41 | 939 | 20 | 56 | 1.02 | .0 | .47 | 9 | 11.8 | nw. | 40 | nw. | 25 | 8 | 16 | 7 | 5.0 | 11.4 | .0 | 0 |
| Lander | 5,352 | 60 | 68 | 829.0 | 1,010.8 | −4.8 | 32.9 | +.5 | 63 | 22 | 45 | −14 | 5 | 20 | 35 | 997 | 19 | 58 | 1.30 | +.1 | .59 | 5 | 5.1 | sw. | 28 | sw. | 17 | 7 | 15 | 9 | 5.6 | 8.9 | .0 | 0 |
| Sheridan [1] | 3,790 | 5 | 38 | 878.4 | 1,011.5 | ----- | 34.9 | +3.5 | 72 | 22 | 48 | −19 | 5 | 22 | 49 | 935 | 22 | 67 | 1.53 | +.4 | .56 | 11 | 8.7 | nw. | 41 | nw. | 31 | 3 | 10 | 18 | 7.5 | 2.7 | .0 | 0 |
| North Platte [2] | 2,821 | 11 | 51 | 910.3 | 1,009.5 | −6.4 | 43.6 | +7.0 | 80 | 21 | 59 | 3 | 3 | 28 | 47 | 666 | 26 | 62 | .29 | −.6 | .26 | 3 | 8.0 | nw. | 24 | ne. | 4 | 9 | 13 | 9 | 5.3 | 3.5 | .0 | 1 |

See footnotes at end of table.

## CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS

| District and station | Elevation of instruments: Barometer above sea level | Thermometer above ground | Anemometer above ground | Pressure: Station | Sea level | Departure from normal | Temperature of the air: Mean | Departure from normal | Maximum | Date | Mean maximum | Minimum | Date | Mean minimum | Greatest daily range | Total degree days | Mean temperature of the dew-point | Mean relative humidity | Precipitation: Total | Departure from normal | Greatest in 24 hours | Days with 0.01 inch or more | Wind: Average hourly velocity | Prevailing direction | Maximum velocity: Miles per hour | Direction | Date | Clear days | Partly cloudy days | Cloudy days | Average cloudiness, tenths | Total snowfall | Snow, sleet, and ice on ground at end of month | Number of days with thunderstorms |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ft. | Ft. | Ft. | Mbs. | Mbs. | Mbs. | °F | °F | °F | | °F | °F | | °F | °F | | °F | % | In. | In. | In. | | Mi. | | | | | | | | 0–10 | In. | In. | |
| **Middle Slope** | | | | | | | 49.6 | +5.5 | | | | | | | | | | 61 | 1.82 | +0.3 | | | | | | | | | | | 5.0 | | | |
| Denver [1] | 5,292 | 106 | 113 | 831.0 | 1,008.8 | −5.4 | 43.2 | +3.9 | 75 | 21 | 54 | 7 | 5 | 32 | 37 | 677 | 20 | 50 | .22 | −.8 | .16 | 4 | 7.9 | s. | 35 | ne. | 24 | 13 | 14 | 4 | 4.4 | 3.3 | .0 | 1 |
| Pueblo [1] | 4,690 | 5 | 36 | 850.7 | 1,009.5 | −3.7 | 43.5 | +2.7 | 80 | 21 | 61 | 9 | 6 | 26 | 56 | 666 | 18 | 44 | .57 | −.0 | .54 | 3 | 9.9 | nw. | 51 | sw. | 15 | 13 | 13 | 5 | 4.5 | 5.0 | .0 | 0 |
| Concordia | 1,392 | 50 | 58 | 961.4 | 1,011.9 | −4.4 | 49.4 | +3.4 | 81 | 27 | 62 | 8 | 6 | 36 | 39 | 490 | 34 | 64 | 1.13 | −.1 | .70 | 6 | 9.4 | s. | 27 | nw. | 2 | 13 | 12 | 6 | 4.4 | 2.2 | .0 | 2 |
| Dodge City [1] | 2,509 | 5 | 58 | 922.5 | 1,009.8 | −5.1 | 49.0 | +6.2 | 77 | 27 | 64 | 10 | 6 | 34 | 40 | 494 | 30 | 58 | .13 | −.8 | .11 | 2 | 17.5 | s. | 54 | sw. | 23 | 17 | 8 | 6 | 3.9 | T | .0 | 2 |
| Wichita [1] | 1,358 | 6 | 64 | 963.1 | 1,011.5 | −4.1 | 51.4 | +6.3 | 80 | 27 | 63 | 14 | 6 | 40 | 39 | 428 | 38 | 68 | 1.85 | +.1 | .84 | 5 | 15.8 | s. | 38 | s. | 16 | 13 | 8 | 10 | 5.1 | 1.2 | .0 | 4 |
| Oklahoma City [2] | 1,214 | 10 | 47 | 968.8 | 1,012.5 | −2.7 | 55.6 | +5.6 | 84 | 27 | 66 | 25 | 6 | 45 | 33 | 300 | 44 | 72 | 4.16 | +2.2 | 1.48 | 12 | 10.3 | s. | 26 | sc. | 11 | 9 | 6 | 17 | 6.5 | .0 | .0 | 5 |
| Tulsa [1] | 674 | 10 | 60 | 988.2 | 1,012.5 | ..... | 55.0 | +5.6 | 83 | 27 | 66 | 23 | 7 | 44 | 38 | 328 | 44 | 74 | 4.67 | +1.7 | 1.72 | 14 | 12.3 | s. | 39 | s. | 11 | 6 | 12 | 13 | 5.9 | T | .0 | 11 |
| **Southern Slope** | | | | | | | 57.8 | +3.9 | | | | | | | | | | 55 | 1.36 | +0.5 | | | | | | | | | | | 4.9 | | | |
| Abilene [1] | 1,738 | 4 | 59 | 950.6 | 1,010.8 | −3.8 | 60.3 | +5.1 | 86 | 27 | 72 | 36 | 6 | 49 | 36 | 168 | 46 | 68 | 2.31 | +1.0 | .80 | 7 | 14.7 | s. | 49 | sw. | 14 | 10 | 3 | 18 | 5.9 | .0 | .0 | 8 |
| Amarillo [1] | 3,676 | 5 | 42 | 894.9 | 1,010.5 | −3.7 | 50.6 | +5.3 | 80 | 26 | 66 | 14 | 6 | 35 | 46 | 448 | 29 | 52 | .41 | +.3 | .35 | 2 | 16.4 | sw. | 50 | sw. | 16 | 14 | 11 | 6 | 4.4 | .5 | .0 | 1 |
| Del Rio | 960 | 63 | 71 | 977.3 | 1,009.8 | −4.4 | 67.1 | +3.6 | 89 | 22 | 77 | 44 | 21 | 57 | 40 | 34 | 52 | 62 | 2.53 | +1.8 | 1.58 | 5 | 10.0 | e. | 29 | nw. | 6 | 9 | 7 | 15 | 6.1 | .0 | .0 | 4 |
| Rosewell | 3,566 | 75 | 85 | 889.3 | 1,010.5 | −2.5 | 53.0 | +1.7 | 81 | 26 | 69 | 28 | 20 | 37 | 47 | 374 | 26 | 38 | .19 | −.6 | .19 | 1 | 9.7 | s. | 37 | w. | 16 | 18 | 12 | 1 | 3.1 | T | .0 | 1 |
| **Southern Plateau** | | | | | | | 59.8 | −2.5 | | | | | | | | | | 48 | 1.18 | +0.4 | | | | | | | | | | | 4.4 | | | |
| El Paso [1] | 3,778 | 39 | 85 | 883.5 | 1,010.5 | −1.4 | 54.2 | −.7 | 79 | 21 | 68 | 30 | 20 | 41 | 44 | 334 | 26 | 36 | .64 | +.3 | .64 | 1 | 13.7 | sw. | 47 | s. | 23 | 17 | 10 | 4 | 3.5 | T | .0 | 3 |
| Albuquerque [1] | 5,314 | 5 | 45 | 834.1 | 1,010.2 | ..... | 45.0 | −.9 | 71 | 26 | 58 | 20 | 8 | 32 | 43 | 618 | 22 | 44 | .50 | −.0 | .24 | 5 | 10.9 | nw. | 50 | nw. | 22 | 12 | 9 | 10 | 5.1 | T | .0 | 3 |
| Flagstaff | 6,907 | 36 | 51 | 786.3 | 1,014.6 | +1.7 | 33.3 | −3.2 | 64 | 12 | 46 | −1 | 7 | 21 | 52 | 987 | 20 | 64 | 4.21 | +2.1 | .94 | 14 | ..... | w. | ..... | ..... | ..... | 12 | 6 | 13 | 5.3 | 35.2 | .0 | 0 |
| Phoenix [2] | 1,107 | 39 | 87 | 974.3 | 1,013.2 | +.3 | 57.2 | −3.5 | 84 | 21 | 70 | 36 | 7 | 45 | 39 | 244 | 36 | 55 | .82 | +.1 | .51 | 7 | 7.0 | e. | 30 | sw. | 23 | 15 | 4 | 12 | 4.9 | .0 | .0 | 0 |
| Tucson [1] | 2,555 | 5 | 39 | 924.5 | 1,012.2 | ..... | 54.6 | −3.1 | 83 | 21 | 68 | 30 | 6 | 41 | 40 | 324 | 32 | 46 | .53 | −.2 | .20 | 4 | ..... | se. | ..... | ..... | ..... | 14 | 4 | 13 | 5.0 | .0 | .0 | 0 |
| Yuma | 142 | 9 | 54 | 1,008.8 | 1,013.2 | −.7 | 60.6 | −3.5 | 89 | 31 | 74 | 41 | 2 | 48 | 37 | 154 | 35 | 46 | .39 | .0 | .33 | 3 | 7.0 | w. | 27 | w. | 21 | 21 | 7 | 3 | 2.9 | .0 | .0 | 1 |
| **Middle Plateau** | | | | | | | 57.7 | −2.6 | | | | | | | | | | 65 | 1.30 | +0.4 | | | | | | | | | | | 6.2 | | | |
| Reno [1] | 4,527 | 20 | 52 | 859.5 | 1,014.2 | −1.0 | 37.4 | −2.6 | 72 | 31 | 52 | −2 | 18 | 23 | 52 | 857 | 26 | 66 | .97 | +.2 | .33 | 9 | 8.4 | nw. | 35 | s. | 25 | 4 | 13 | 14 | 6.5 | 15.4 | .0 | 0 |
| Tonopah | 6,090 | 9 | 20 | 809.3 | 1,011.5 | ..... | 35.2 | −5.3 | 66 | 31 | 45 | 16 | 24 | 26 | 33 | 920 | 26 | 70 | 1.30 | +.8 | .50 | 9 | ..... | w. | ..... | ..... | ..... | 16 | 12 | 3 | ..... | 13.5 | .0 | 0 |
| Winnemucca | 4,339 | 5 | 56 | 864.5 | 1,013.5 | −2.8 | 37.8 | −2.2 | 64 | 12 | 49 | 15 | 5 | 26 | 36 | 844 | 26 | 66 | 1.63 | +.7 | .39 | 13 | 8.3 | sw. | 31 | s. | 17 | 5 | 9 | 17 | 6.9 | 17.5 | .0 | 0 |
| Modena | 5,473 | 10 | 46 | 829.3 | 1,011.2 | −3.4 | 35.0 | −3.2 | 67 | 31 | 48 | 3 | 6 | 22 | 41 | 931 | ..... | ..... | 1.80 | +.8 | .80 | 10 | 9.1 | sw. | 24 | s. | 16 | 11 | 10 | 10 | 5.2 | 21.9 | .0 | 0 |
| Salt Lake City [1] | 4,227 | 32 | 58 | 863.5 | 1,012.9 | −2.3 | 38.9 | −1.1 | 67 | 12 | 49 | 12 | 5 | 29 | 33 | 807 | 28 | 68 | 1.49 | −.3 | .41 | 12 | 9.8 | se. | 35 | se. | 26 | 6 | 11 | 14 | 6.5 | 13.4 | .0 | 2 |
| Grand Junction | 4,602 | 60 | 68 | 855.4 | 1,010.5 | −3.4 | 42.1 | −1.5 | 69 | 21 | 53 | 17 | 6 | 32 | 35 | 708 | 24 | 54 | .64 | −.1 | .26 | 8 | 6.8 | se. | 34 | s. | 26 | 7 | 11 | 13 | 6.1 | .8 | .0 | 0 |
| **Northern Plateau** | | | | | | | 39.4 | −1.4 | | | | | | | | | | 68 | 1.49 | +0.4 | | | | | | | | | | | 7.4 | | | |
| Baker [2] | 3,471 | 36 | 54 | 892.0 | 1,013.5 | −3.4 | 36.5 | −1.1 | 64 | 30 | 46 | 4 | 5 | 27 | 38 | 883 | 26 | 68 | .56 | −.5 | .16 | 9 | 7.0 | se. | 30 | nw. | 26 | 3 | 11 | 17 | 7.6 | 1.9 | .0 | 0 |
| Boise [1] | 2,739 | 5 | 49 | 917.0 | 1,013.9 | −3.0 | 40.0 | −1.4 | 61 | 12 | 49 | 12 | 5 | 31 | 27 | 772 | 28 | 66 | 1.76 | +.4 | .70 | 10 | 11.5 | se. | 36 | nw. | 23 | 4 | 6 | 21 | 7.5 | 1.7 | .0 | 1 |
| Pocatello [1] | 4,478 | 5 | 31 | 859.1 | 1,013.9 | −2.4 | 35.2 | −.7 | 63 | 22 | 45 | 0 | 6 | 26 | 37 | 919 | 25 | 68 | 1.41 | +.1 | .29 | 14 | 11.0 | sw. | 34 | w. | 31 | 4 | 9 | 18 | 7.1 | 13.8 | .0 | 0 |
| Spokane [1] | 1,929 | 27 | 42 | 943.1 | 1,012.5 | −3.8 | 37.8 | −1.9 | 62 | 30 | 46 | 2 | 5 | 30 | 30 | 842 | 30 | 71 | 2.46 | +1.3 | .81 | 17 | 8.2 | sw. | 31 | sw. | 10 | 4 | 4 | 23 | 7.9 | 4.4 | .0 | 0 |
| Walla Walla | 991 | 57 | 65 | 978.0 | 1,013.5 | −3.1 | 44.6 | −1.5 | 67 | 30 | 52 | 16 | 5 | 37 | 25 | 636 | ..... | ..... | 2.49 | +.9 | .75 | 18 | 7.2 | s. | 24 | w. | 31 | 5 | 11 | 15 | 6.9 | .7 | .0 | 0 |
| Yakima | 1,076 | 58 | 67 | 973.9 | 1,012.5 | ..... | 42.4 | −1.7 | 70 | 30 | 52 | 15 | 5 | 33 | 36 | 700 | ..... | ..... | .27 | −.1 | .09 | | 66.9 | nw. | 27 | nw. | 31 | 2 | 11 | 18 | 7.2 | .0 | .0 | 0 |
| **North Pacific Coast** | | | | | | | 44.9 | −0.8 | | | | | | | | | | 76 | 6.08 | +2.0 | | | | | | | | | | | 8.0 | | | |
| North Head | 211 | 5 | 55 | 1,005.8 | 1,013.2 | −3.1 | 44.4 | −.8 | 56 | 26 | 49 | 33 | 5 | 40 | 14 | 638 | 40 | 84 | 7.86 | +2.3 | 1.19 | 27 | 18.6 | s. | 64 | s. | 19 | 3 | 4 | 24 | 8.2 | T | .0 | 0 |
| Seattle [2] | 125 | 90 | 321 | 1,008.8 | 1,013.2 | −2.4 | 45.6 | −.8 | 59 | 25 | 51 | 32 | 5 | 40 | 18 | 599 | 36 | 73 | 4.99 | +1.9 | 1.01 | 23 | 12.4 | s. | 40 | sw. | 30 | 3 | 12 | 16 | 7.2 | T | .0 | 0 |
| Tacoma | 194 | 172 | 201 | 1,006.4 | 1,013.2 | −2.7 | 44.4 | +.2 | 59 | 30 | 50 | 30 | 5 | 38 | 20 | 640 | ..... | ..... | 3.81 | +.3 | .70 | 23 | 10.7 | s. | 34 | s. | 19 | 4 | 10 | 17 | 7.3 | T | .0 | 1 |
| Tatoosh Island | 86 | 9 | 61 | 1,008.5 | 1,011.5 | −3.1 | 43.8 | +.9 | 54 | 26 | 47 | 34 | 5 | 40 | 11 | 655 | 38 | 80 | 11.93 | +4.1 | 3.03 | 23 | 18.7 | s. | 61 | s. | 19 | 4 | 6 | 21 | 7.6 | T | .0 | 0 |
| Medford [1] | 1,329 | 29 | 58 | 968.2 | 1,016.3 | ..... | 44.3 | −2.6 | 75 | 30 | 54 | 23 | 5 | 34 | 40 | 641 | 34 | 71 | 1.98 | +.5 | .62 | 18 | ..... | nw. | ..... | ..... | ..... | 1 | 6 | 24 | 8.5 | T | .0 | 0 |
| Portland, Oreg. [3] | 154 | 68 | 106 | 1,009.5 | 1,014.9 | −1.7 | 46.0 | −.9 | 64 | 30 | 52 | 30 | 5 | 40 | 24 | 588 | 38 | 77 | 7.12 | +3.2 | 1.35 | 25 | 7.8 | se. | 23 | s. | 17 | 1 | 4 | 26 | 8.7 | T | .0 | 0 |
| Roseburg | 510 | 45 | 76 | 997.6 | 1,016.3 | −1.0 | 45.5 | −1.6 | 65 | 30 | 53 | 30 | 5 | 38 | 29 | 604 | 36 | 74 | 4.85 | +1.6 | 1.44 | 24 | 4.5 | s. | 24 | sw. | 17 | 1 | 9 | 21 | 8.2 | .0 | .0 | 0 |
| **Middle Pacific Coast** | | | | | | | 49.8 | −2.8 | | | | | | | | | | 74 | 4.48 | +0.9 | | | | | | | | | | | 6.8 | | | |
| Eureka | 60 | 72 | 88 | 1,016.9 | 1,018.6 | +.6 | 47.2 | −1.1 | 61 | 9 | 53 | 34 | 24 | 41 | 24 | 551 | 41 | 80 | 6.03 | +.8 | 1.15 | 23 | 8.6 | s. | 32 | n. | 31 | 3 | 8 | 20 | 7.6 | .0 | .0 | 1 |
| Red Bluff [1] | 353 | 5 | 26 | 1,003.7 | 1,015.9 | −1.4 | 49.2 | −4.4 | 81 | 30 | 60 | 32 | 5 | 39 | 36 | 490 | 37 | 66 | 4.89 | +1.6 | .92 | 13 | 8.2 | nw. | 34 | se. | 16 | 4 | 10 | 17 | 7.2 | .0 | .0 | 0 |
| Sacramento | 66 | 92 | 115 | 1,014.6 | 1,016.6 | −.3 | 50.8 | −3.5 | 77 | 30 | 60 | 34 | 18 | 41 | 30 | 438 | 40 | 74 | 2.83 | +.3 | .86 | 9 | 8.1 | s. | 30 | se. | 16 | 9 | 9 | 13 | 6.0 | 0 | 0 | 0 |
| San Francisco [3] | 155 | 112 | 132 | 1,012.2 | 1,017.3 | −.7 | 51.8 | −2.4 | 72 | 30 | 57 | 43 | 4 | 46 | 19 | 409 | 42 | 78 | 4.15 | +1.0 | .93 | 11 | 8.8 | w. | 29 | w. | 21 | 6 | 10 | 15 | 6.4 | .0 | .0 | 0 |
| **South Pacific Coast** | | | | | | | 53.6 | −2.7 | | | | | | | | | | 68 | 2.57 | +0.5 | | | | | | | | | | | 5.2 | | | |
| Fresno [1] | 327 | 5 | 34 | 1,005.1 | 1,016.9 | +.6 | 50.5 | −3.9 | 76 | 31 | 61 | 33 | 7 | 40 | 34 | 447 | 40 | 72 | 2.25 | +.7 | .74 | 9 | 5.9 | nw. | 32 | nw. | 23 | 8 | 10 | 13 | 6.2 | .0 | .0 | 1 |
| Los Angeles | 338 | 223 | 250 | 1,004.4 | 1,016.3 | −.3 | 54.6 | −2.9 | 83 | 31 | 63 | 39 | 1 | 46 | 31 | 336 | 38 | 62 | 3.43 | +.6 | .79 | 12 | 8.1 | w. | 38 | nw. | 23 | 12 | 11 | 8 | 4.5 | .0 | .0 | 3 |
| San Diego [1] | 87 | 20 | 55 | 1,013.9 | 1,016.3 | −.3 | 55.8 | −1.2 | 84 | 31 | 64 | 42 | 7 | 47 | 32 | 287 | 45 | 71 | 2.03 | +.3 | .43 | 12 | 7.8 | w. | 36 | sw. | 23 | 13 | 8 | 10 | 4.9 | .0 | .0 | 0 |
| **West Indies** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| San Juan, P. R. | 82 | 10 | 54 | 1,013.5 | 1,017.6 | ..... | 74.6 | −.8 | 82 | 22 | 78 | 69 | 27 | 71 | 11 | 0 | 68 | 78 | 1.12 | −2.0 | .28 | 12 | 14.1 | e. | 26 | e. | 5 | 6 | 23 | 2 | 5.2 | .0 | .0 | 0 |
| **Panama Canal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Balboa Heights | 118 | 6 | 92 | ..... | [4]1,010.5 | .0 | 82.9 | +1.3 | 94 | 31 | 92 | 71 | 28 | 74 | 21 | ..... | 71 | [5]73 | 0.00 | −.7 | .00 | 0 | 10.3 | n. | 26 | n. | 17 | 11 | 20 | 0 | 3.9 | .0 | .0 | 0 |
| Cristobal | 27 | 47 | 97 | ..... | [4]1,011.5 | .0 | 80.8 | −.4 | 86 | 21 | 84 | 75 | 27 | 78 | 9 | ..... | 72 | [5]76 | .43 | −1.1 | .15 | 9 | 15.1 | ne. | 26 | ne. | 3 | 6 | 22 | 3 | 5.2 | .0 | .0 | 0 |
| **Alaska** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Anchorage [1] | 132 | 6 | 44 | 990.9 | 995.9 | ..... | 23.6 | −.1 | 43 | 3 | 33 | −7 | 16 | 14 | 39 | 1,287 | 18 | 72 | 1.23 | +.7 | .32 | 14 | 6.5 | n. | 27 | sw. | 3 | 4 | 6 | 21 | 7.5 | 9.0 | 7.0 | 0 |
| Fairbanks [1] | 455 | 5 | 63 | 982.7 | 1,000.7 | ..... | 10.4 | +.8 | 44 | 29 | 23 | −25 | 16 | −2 | 53 | 1,690 | 5 | 74 | .53 | −.1 | .21 | 10 | 5.2 | e. | 25 | w. | 29 | 4 | 9 | 18 | 6.9 | 8.9 | 10.3 | 0 |
| Juneau [1] | 80 | 6 | 32 | 997.6 | 1,000.7 | ..... | 35.4 | ..... | 45 | 22 | 40 | 25 | 3 | 31 | 18 | 917 | 30 | 80 | 4.54 | ..... | .74 | 23 | 11.3 | se. | 34 | se. | 28 | 0 | 2 | 29 | 9.0 | 9.3 | .0 | 0 |
| Nome | 22 | 25 | 56 | 1,000.3 | 1,001.0 | ..... | 1.8 | −6.9 | 34 | 2 | 11 | −29 | 24 | −7 | 35 | 1,959 | 0 | 85 | 1.35 | +.5 | .54 | 11 | 9.5 | n. | 45 | e. | 3 | 11 | 7 | 13 | 5.8 | 15.0 | 34.7 | 0 |
| Barrow | 29 | 5 | 27 | 1,011.9 | 1,012.5 | ..... | 17.1 | −2.3 | 5 | 1 | −12 | −41 | 24 | −22 | 26 | 2,597 | −18 | 97 | .20 | +.1 | .16 | 4 | 9.9 | ne. | 29 | ne. | 3 | 9 | 6 | 16 | 5.7 | 2.0 | 15.3 | 0 |
| Bethel | 28 | 5 | 31 | ..... | 999.0 | ..... | 6.4 | −5.4 | 40 | 2 | 16 | −24 | 14 | −3 | 39 | 1,814 | 5 | 89 | .91 | .0 | .31 | 18 | 12.7 | n. | 51 | ..... | ..... | 6 | 9 | 16 | 5.7 | 2.6 | 22.8 | 0 |
| Gambell | 32 | 5 | 32 | 1,007.1 | 1,009.5 | ..... | 4.4 | −10.7 | 32 | 2 | 1 | −25 | 12 | −10 | 20 | 2,151 | −6 | 87 | .26 | −.7 | ..... | 10 | ..... | ne. | 24 | n. | 6 | 9 | 1 | 39 | ..... | 2.6 | 22.8 | 0 |
| Ketchikan | 75 | 69 | 90 | 1,003.1 | 1,004.1 | ..... | 38.6 | +.8 | 50 | 25 | 43 | 28 | 17 | 34 | 17 | 819 | 32 | 80 | 16.67 | +4.5 | 1.96 | 27 | 90 | se. | 32 | se. | 10 | 2 | 2 | 29 | 8.9 | 2.7 | .0 | 0 |
| Kotzebue | 20 | 5 | 31 | 1,003.4 | 1,004.1 | ..... | 5.5 | −4.6 | 28 | 4 | 4 | −41 | 24 | −15 | 36 | 2,188 | −6 | 90 | .14 | −.1 | .07 | 5 | 12.8 | e. | 47 | e. | 3 | 4 | 11 | 16 | 6.7 | 2.5 | 14.0 | 0 |
| Northway | 1,718 | 5 | 32 | ..... | 999.7 | ..... | 8.4 | ..... | 41 | 27 | 23 | −27 | 17 | −6 | 46 | 1,733 | 6 | 76 | .31 | ..... | .17 | 7 | 5.2 | nw. | 25 | ..... | 30 | 5 | 5 | 21 | 7.4 | 5.6 | 16.6 | 0 |
| **Hawaii** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Honolulu | 38 | 86 | 100 | 1,018.0 | 1,018.6 | ..... | 73.8 | +2.4 | 81 | 23 | 78 | 66 | 5 | 70 | 12 | 0 | ..... | ..... | 1.10 | −2.1 | .37 | 16 | 11.7 | e. | 29 | ne. | 14 | 11 | 16 | 4 | 4.7 | .0 | .0 | 0 |

[1] Data are airport records.
[2] Barometric data (adjusted to old city elevation) and hygrometric data from airport; otherwise city office records.
[3] Observations taken hourly.
[4] Pressure (adjusted to old city elevation), temperature, and hygrometric data from airport; otherwise city office records.
[5] Temperature and precipitation from city records, other data from airport.

NOTE.—Except as indicated by notes [1], [2], [4], and [5], data in table are city office records.

## SEVERE LOCAL STORMS, MARCH 1945

[Compiled by Mary O. Souder]

[The table herewith contains such data as has been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

| Place | Date | Time | Width of path, yards | Loss of life | Value of property destroyed | Character of storm | Remarks |
|---|---|---|---|---|---|---|---|
| Kosse, Tex. | 3 | 7 a. m. | 67 | 0 | $2,000 | Tornado | 3 persons injured, 1 seriously; some damage to farm buildings. |
| Mexia, Tex. | 6 | 2 a. m. | 67 | 0 | 15,000 | do | Buildings unroofed, utilities disrupted, and many old trees uprooted. |
| Jessieville, Ark., vicinity of. | 6 | 5 a. m., C. W. T. | 440 | 0 | | do | Property damage estimated at several thousands; path 1½ miles long. |
| Abilene, Tex. | 14 | 6:30 p. m. | | | 3,000 | Wind and hail | A person injured by a falling sign; fabric plane wings punctured by small hail. |
| Oklahoma City, Okla. | 14 | 7 p. m. | | | 7,500 | Wind | Section of livestock pavilion at fair grounds unroofed; plate glass windows broken; trees damaged. |
| Haskell, Tex. | 14 | do | 300 | 0 | 6,000 | Tornado | A large warehouse destroyed. |
| Stamford, Tex. | 14 | do | 100 | 0 | 25,000 | do | Many residences and buildings badly damaged. |
| Bridgeport, Tex. | 14 | 8:30 p. m. | [1]18 | | 60,000 | Wind | Buildings damaged. |
| Gainesville, Tex. | 14 | 9:30 p. m. | | | 110,000 | do | Buildings damaged; windmill blown over; property damage, $100,000; crops loss, $10,000. |
| Dolen, Tex. | 15 | 2:30 a. m. | 67 | 2 | 1,500 | Tornado | Farmhouse destroyed and 1 person injured. |
| Kirbyville, Tex. | 15 | 3 a. m. | 440 | 0 | 50,000 | do | 5 farmhouses destroyed; 2 persons injured; buildings and timber in path damaged. |
| Bryan County, Okla. | 16 | 10:30 p. m. | | 1 | | do | 36 buildings destroyed including 6 houses, 10 barns and 20 other buildings and 61 buildings damaged including 6 residences, 15 barns and 40 other buildings; some poultry lost. Loss considerable, not estimated. |
| Kanawha, Garner, and Miller, Iowa, and vicinities. | 16 | 11 p. m. | | 0 | 100,000 | do | Storm originated about a mile west of Kanawha, damaging trees and wires. After traveling a short distance in a northeasterly direction the storm seemed to split and each section developed into a rather violent twister as Highway 111 was reached. The "twin" character of the storm was evident along much of its course, some of the observers reported that there were from 4 to 6 pendent clouds. The northern branch wrecked buildings on several farms about 3 miles north of Kanawha, and after traveling a few miles farther disappeared. The southern twister caused the greatest destruction, but after crossing Highway 111, it too diminished in intensity. It then traveled approximately 12 miles to the northeast in the vicinity of Garner. West of Garner, and after striking the town, the storm headed almost due north leaving a trail of destruction 1 mile wide and 6 miles long between Garner and Miller. After reaching Miller, the storm decreased in intensity until it reached the southwestern corner of Worth County before causing additional loss. It again developed tornadic characteristics at Fertile, passed over Hanlonton and west of Kensett. Somewhere in this area the storm seemed to split, passing on both sides of Northwood then dissipating as it approached the Minnesota border shortly before midnight. The entire path about 50 miles long. |
| Grant, Okla. | 16 | Midnight | | | | do | 20 homes, 30 barns, and 52 outbuildings damaged; 8 barns and 40 outbuildings destroyed; poultry killed. |
| Idabel, Okla., and vicinity. | 16 | do | | 0 | | do | Several barns destroyed, numerous other buildings, a hangar and a plane damaged; several light poles down; numerous trees uprooted; damage estimated to be several thousands of dollars. |
| Pike County, Ind. | 17 | 2:30 a. m. | 440 | | 2,000 | Wind | Buildings damaged. |
| Martin County, Ind. | 17 | 3 a. m. | | | 500 | do | Property damaged. |
| Mt. Vernon, Evansville, and Boonville, Ind., and vicinities. | 17 | do | | 0 | 1,000,000 | Tornado, thundersquall and rain. | 25 homes destroyed, 50 badly damaged, and about 100 others affected to some extent. 15 to 20 planes damaged outside of the Republic Aviation Plant and 5 small planes at the Auxiliary Airport damaged. Considerable loss to power and communication lines; 20 persons slightly injured. |
| Posey, Vanderburgh, Warrick, and Dubois Counties, Ind. | 17 | do | 880 | 0 | 1,000,000 | Tornado and hail | Many buildings damaged; poles and wires down; 20 persons injured, path about 60 miles long. |
| Lawrence County, Ind. | 17 | 4 a. m. | [1]5 | | 5,000 | Wind | Trees, wires and buildings damaged. |
| Jackson County, Ind. | 17 | 4:30 a. m. | [1]8 | | 52,000 | do | Buildings, trees, and wires damaged. |
| Monroe County, Ind. | 17 | | | | 1,000 | do | Poles and wires down. |
| Richmond, Va. | 17 | | | 1 | 2,500 | do | Few trees twisted; man electrocuted by live wire; woman severely injured by broken glass. |
| Laverne, Okla. | 18 | 10:45 p. m. | | 0 | 10,000 | Tornado | Storm traveled about 3 miles; several barns destroyed. |
| Attica and Harper Kans., and vicinities. | 19 | 1:20–2 a. m. | [1]5–6 | | 250,000 | Heavy hail | Roofs damaged and innumerable window panes broken; loss in fruit crop loss small; path 15 miles long. |
| Waynoka, Okla. | 19 | 1:20 a. m. | | | 20,000 | do | Property damaged. |
| Clearwater to Udall, Kans. | 19 | 2:45–3:15 a. m. | [1]5 | | 60,000 | do | Chief damage to roofs and windows in Mulvane. Considerable damage to farm buildings; path 25 miles long. |
| Franklin, Ind. | 19 | 5:15 p. m. | 880 | | 1,000 | Wind | Buildings damaged; poles down. |
| Shelbyville, Ind. | 19 | 5:30 p. m. | 880 | | 40,000 | do | Buildings damaged. |
| Madison, Ind. | 19 | 6:45 p. m. | 880 | | 100,000 | do | 7 persons injured; buildings damaged. |
| Clark County, Ind. | 19 | | | | 1,000 | do | Trees and wires down. |
| Hancock County, Ind. | 19 | | | | | Electrical | Barn struck by lightning and burned; 105 head of cattle lost. |
| Hugo, Okla. | 19 | | | | | Wind | Much property damaged; amount not estimated. |
| Washington County, Ind. | 19–20 | | | | 10,000 | Flash flood | Brock Creek highest since 1913; Blue River highest known; many buildings flooded. |
| Lovell, Fla. | 20 | | | 0 | 15,000 | Tornado | Loss to buildings and household effects; chickens killed; path 20 to 30 miles long with dips. |
| De Soto, Kans., southern edge. | 24 | 11:30 a. m. | [1]17 | 0 | 2,000 | Small tornado | Damage to small residence and to telephone and power lines; path 33 yards long. |
| Racine and Zumbro Falls, Minn. | 24 | 6–7 p. m., C. W. T. | 220 | | 12,000 | Thundersquall | Property damaged; path 55 miles long. |
| Jewell, Kans. | 24 | p. m. | | | 20,000 | Heavy hail | Hailstones small, but fell in great quantity, being 3 inches deep in places. |
| Berryville, Ark., 2½ miles northwest. | 24 | | 880 | 0 | | Tornado | Property damaged; path 9 miles long. |
| Cedar Rapids, Iowa. | 24 | | | | 500 | Electrical | School damaged by lightning. |
| Clarksville to Alta Vista, Iowa. | 24 | | | | 25,000 | Tornadic winds | Damage to buildings on 25 farms; many trees blown down or uprooted; utility service interrupted; path narrow and about 30 miles long. |
| Cameron, S. C. | 27 | a. m. | | | 4,000 | Electrical | Barn with contents and 3 mules burned. |

## SEVERE LOCAL STORMS, MARCH 1945—Continued

| Place | Date | Time | Width of path, yards | Loss of life | Value of property destroyed | Character of storm | Remarks |
|---|---|---|---|---|---|---|---|
| Milwaukee, Wis. | 27 | 3:03 p. m. | | | $7,500 | Wind | Several plate glass windows broken in various sections of the city; 4 persons injured by flying glass and a man seriously injured by a falling storm window. |
| Clarksville, Tex. | 28 | 1 a. m. | [1] 2 | 0 | | Tornado | Several persons injured, 1 critically; 30 buildings wrecked and scores damage; no estimated of loss given. |
| Wills Point, Tex. | 28 | 6:45 p. m. | [1] 8 | | 5,000 | Hail | Property damage, $4,500; crop loss, $500. |
| Wills Point, Tex. | 28 | do. | 880 | 0 | 20,000 | Tornado | Many buildings and utility lines damaged; more than 10 persons injured. |
| Terrell, Tex. | 28 | 8 p. m. | 440 | 0 | | do | 2 persons injured; property damage considerable, not estimated. |
| Polland, Redland, and Shultz, Okla. | 28 | Near midnight | 880–2,640 | 0 | | Tornado, electrical and rain. | Numerous houses, barns, and other buildings damaged; few destroyed; many trees uprooted or broken; barn and contents burned; loss estimated as considerable. |
| La Fontaine and Altoona, Kans., vicinities of. | 29 | 12:30 a. m.-1 a. m. | [1] 1–2½ | 0 | 25,000 | Tornado | Damage to barns and small farm buildings; path 13 miles long. |
| Kingston, Okla. | 29 | 7 p. m. | [1] 2 | 0 | 5,000 | do | 3 houses and a barn demolished; several others damaged; 5 persons injured. |
| New Braunfels, Tex. | 29 | do. | 880 | | 150,000 | Wind | Landa Park grandstand damaged; many buildings unroofed and park trees uprooted. |
| Sulphur Springs, Tex. | 29 | 9 p. m. | | 0 | | Tornado | Much property damaged; 2 persons injured; amount not estimated. |
| Kosse, Tex. | 30 | 6 a. m. | 150 | 0 | 600 | do | Small buildings damaged; farmhouse damaged. |
| Wooster, Tex. | 30 | 9 a. m. | 440 | 0 | 10,000 | do | Small buildings damaged. |
| Dilley, Tex. | 31 | do. | | | | Wind and hail | Much loss in truck crops; many buildings unroofed. |
| Syracuse, N. Y., and vicinity. | 31 | p. m. | | | 25,000 | Wind | Extreme wind velocity of 59 miles and gusts ranging from 60 to 70 miles an hour registered. This is the highest wind ever recorded since Syracuse was established in 1902. Trees blown down, some falling on parked cars; power and telephone service interrupted; some cattle killed. |

[1] Miles instead of yards.

# SOLAR RADIATION AND SUNSPOT DATA FOR MARCH 1945

[Solar Radiation Investigations Section, I. F. Hand, in charge]

## SOLAR RADIATION OBSERVATIONS

Explanations of the tables and references to descriptions of instruments, stations, and methods of observation, and to summaries of data, are given in the January 1944 REVIEW, page 43. A list of the pyrheliometric stations also is given on page 45 of the same REVIEW.

While measurements of total solar and sky radiation have been made at a large number of places during the last thirty years, very few measurements of total solar and sky radiation received on vertical surfaces have been obtained. Early in March two pyrheliometers were mounted on vertical surfaces, one facing East and the other South. These observations should enable the determination of the approximate amount of radiation reflected from ground surfaces, both snow-covered and snow free. It is hoped that measurements on these vertical surfaces can be continued for at least a year.

These measurements and their ratios to the total solar and sky radiation received on a horizontal surface will be included in a new table, starting with an early issue.

TABLE 1.—*Solar radiation intensities during March 1945*

[GRAM-CALORIES PER MINUTE PER SQUARE CENTIMETER OF NORMAL SURFACE]

### MADISON, WIS.

| Date | Sun's zenith distance. 7:30 a.m. | 78.7° | 75.7° | 70.7° | 60.0° | 0.0° | 60.0° | 70.7° | 75.7° | 78.7° | 1:30 p.m. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 75th mer. time | Air mass A.M. | | | | *1.0 | P.M. | | | | 75th mer. time |
| | e. | 5.0 | 4.0 | 3.0 | 2.0 | | 2.0 | 3.0 | 4.0 | 5.0 | e. |
| 1945 | mb. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | mb. |
| Mar. 1 | 4.8 | 0.57 | 0.61 | | | | | | | | 5.8 |
| Mar. 3 | 4.4 | | | 1.13 | 1.28 | 1.54 | 1.28 | | | | 3.8 |
| Mar. 7 | 2.0 | .92 | 1.03 | 1.11 | 1.22 | 1.56 | | | | | 3.1 |
| Mar. 10 | 4.2 | .53 | .66 | .79 | 1.03 | 1.42 | | | | | 4.2 |
| Mar. 12 | 4.0 | | .95 | 1.08 | 1.24 | 1.50 | | | | | 6.1 |
| Mar. 13 | 4.2 | | .59 | .74 | .96 | 1.25 | | | | | 5.1 |
| Mar. 21 | 3.3 | .94 | 1.04 | 1.15 | 1.31 | 1.50 | | | | | 4.2 |
| Mar. 22 | 4.4 | .73 | .84 | .99 | 1.11 | 1.33 | | | | | 6.4 |
| Mar. 27 | 9.8 | .41 | .53 | .68 | .96 | 1.23 | | | | | 9.4 |
| Mar. 28 | 10.6 | .42 | .59 | .83 | 1.07 | 1.46 | | | | | 8.1 |
| Mar. 31 | 7.2 | .74 | .87 | 1.02 | .95 | 1.42 | | | | | 7.8 |
| **Means** | | .66 | .77 | .95 | 1.11 | 1.42 | (1.28) | | | | |
| **Departures** | | −.16 | −.20 | −.06 | −.18 | −.10 | −.01 | | | | |

### LINCOLN, NEBR.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mar. 1 | 5.1 | | | | | | | 0.96 | 0.82 | 0.66 | 6.4 |
| Mar. 3 | 2.5 | 0.77 | 0.87 | 0.92 | 1.16 | 1.40 | 1.22 | | | | 3.3 |
| Mar. 7 | 2.0 | .59 | .75 | .92 | 1.16 | 1.34 | | | | | 3.5 |
| Mar. 8 | 4.6 | | | 1.03 | 1.18 | 1.30 | 1.22 | | | | 4.8 |
| Mar. 9 | 5.1 | | | | | | 1.14 | .90 | .49 | | 6.9 |
| Mar. 12 | 5.1 | | .62 | .85 | 1.07 | 1.35 | | | | | 4.8 |
| Mar. 13 | 5.8 | | | .79 | 1.01 | 1.30 | .99 | | | | 8.4 |
| Mar. 15 | 12.6 | | | | | | | .88 | .77 | .69 | 10.5 |
| Mar. 17 | 6.6 | | | | | 1.38 | 1.29 | 1.11 | 1.01 | | 7.2 |
| Mar. 20 | 4.6 | .87 | .98 | 1.24 | 1.31 | 1.55 | 1.27 | 1.11 | .96 | .88 | 5.6 |
| Mar. 21 | 4.8 | | | | | 1.40 | 1.22 | 1.03 | | | 6.4 |
| Mar. 23 | 10.5 | | | | 1.20 | | | | | | 6.1 |
| Mar. 26 | 7.8 | .68 | .85 | 1.05 | 1.24 | 1.40 | 1.19 | .97 | .77 | .71 | 8.4 |
| Mar. 27 | 10.2 | .68 | .79 | .96 | 1.14 | 1.45 | 1.10 | | | | 5.8 |
| Mar. 28 | 5.6 | .90 | 1.01 | 1.34 | 1.27 | 1.40 | | | | | 6.6 |
| Mar. 29 | 6.1 | | | | | 1.42 | 1.12 | .90 | .71 | .54 | 7.2 |
| Mar. 30 | 6.9 | | | | | 1.47 | 1.24 | 1.08 | .95 | .81 | 7.8 |
| Mar. 31 | 6.4 | | | | 1.19 | 1.50 | | | | | 8.5 |
| **Means** | | .75 | .84 | 1.01 | 1.18 | 1.40 | 1.18 | .99 | .81 | .72 | |
| **Departures** | | −.08 | −.09 | −.08 | −.09 | −.11 | −.09 | −.09 | −.12 | −.09 | |

TABLE 1.—*Solar radiation intensities during March 1945*—Con.

### ALBUQUERQUE, N. MEX.

| Date | Sun's zenith distance. 7:30 a.m. | 78.7° | 75.7° | 70.7° | 60.0° | 0.0° | 60.0° | 70.7° | 75.7° | 78.7° | 1:30 p.m. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 75th mer. time | Air mass A.M. | | | | *1.0 | P.M. | | | | 75th mer. time |
| | e. | 5.0 | 4.0 | 3.0 | 2.0 | | 2.0 | 3.0 | 4.0 | 5.0 | e. |
| | mb. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | mb. |
| Mar. 2 | 2.6 | | 1.13 | | | | | | | | 2.7 |
| Mar. 3 | 3.0 | 0.98 | 1.07 | 1.18 | 1.32 | 1.60 | 1.42 | 1.35 | 1.33 | 1.29 | 3.0 |
| Mar. 4 | 3.4 | 1.01 | 1.09 | 1.17 | 1.31 | 1.46 | | | | | 3.6 |
| Mar. 6 | 2.3 | 1.02 | 1.14 | 1.24 | 1.37 | 1.64 | 1.47 | 1.44 | 1.35 | 1.32 | 3.2 |
| Mar. 7 | 2.4 | 1.02 | 1.11 | 1.18 | 1.34 | 1.59 | 1.38 | 1.31 | 1.24 | 1.14 | 3.0 |
| Mar. 8 | 2.0 | .88 | 1.00 | 1.09 | 1.28 | | 1.31 | 1.27 | 1.17 | 1.14 | 2.1 |
| Mar. 9 | 2.0 | 1.08 | 1.16 | 1.25 | 1.34 | | 1.44 | 1.41 | 1.36 | 1.34 | 3.0 |
| Mar. 10 | 2.6 | .92 | .98 | 1.07 | 1.28 | 1.53 | 1.39 | 1.35 | 1.29 | 1.25 | 2.1 |
| Mar. 11 | 2.6 | .83 | .89 | 1.06 | 1.21 | 1.43 | 1.41 | 1.34 | 1.31 | 1.31 | 2.9 |
| Mar. 12 | 3.0 | | | .56 | .96 | 1.37 | 1.24 | 1.26 | 1.24 | 1.24 | 3.4 |
| Mar. 16 | 4.4 | | | | | | 1.35 | | | | 2.5 |
| Mar. 19 | 2.7 | .98 | | | | | | | | | 2.9 |
| Mar. 20 | 2.6 | 1.07 | 1.12 | 1.30 | 1.38 | | 1.46 | 1.46 | 1.41 | 1.37 | 2.6 |
| Mar. 21 | 2.7 | | | | 1.10 | | | | | | 2.5 |
| Mar. 25 | 3.4 | | | | 1.25 | | 1.42 | 1.37 | 1.33 | 1.32 | 3.4 |
| Mar. 26 | 3.6 | | | | 1.15 | | 1.44 | | | | 2.7 |
| Mar. 27 | 3.2 | | | | | | 1.35 | 1.28 | 1.22 | 1.19 | 2.0 |
| Mar. 28 | 2.4 | | | | 1.26 | | 1.47 | | | | 2.5 |
| Mar. 29 | 2.6 | 1.00 | 1.06 | | | | | | | | 2.2 |
| Mar. 31 | 2.4 | | 1.01 | 1.12 | 1.26 | 1.47 | 1.41 | 1.35 | | | 3.2 |
| **Means** | | .98 | 1.06 | 1.11 | 1.25 | 1.52 | 1.39 | 1.35 | 1.30 | 1.26 | |
| **Departures** | | −.04 | −.06 | −.11 | −.10 | −.12 | −.01 | +.05 | +.09 | +.12 | |

### BOSTON, MASS.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mar. 1 | 5.1 | | | | | | 1.29 | | | | 4.0 |
| Mar. 5 | 2.2 | 0.50 | 0.63 | 0.91 | 1.01 | | | | | | 4.4 |
| Mar. 8 | 2.3 | | | | | | .89 | | | | 3.8 |
| Mar. 9 | 3.3 | .63 | .83 | .83 | 1.10 | | .82 | 0.82 | | | 3.3 |
| Mar. 10 | 4.6 | | .35 | .43 | | | | | | | 4.8 |
| Mar. 13 | 5.3 | | .69 | .91 | 1.20 | | 1.26 | | | | 4.6 |
| Mar. 14 | 4.6 | | | | .42 | | 1.02 | | | | 5.3 |
| Mar. 26 | 5.6 | | | .89 | | | | | | | 8.4 |
| Mar. 27 | 8.5 | | | .82 | | | | | | | 9.8 |
| **Means** | | (.56) | .62 | .80 | .93 | | 1.06 | (.82) | | | |

### BLUE HILL, MASS.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mar. 1 | 5.1 | 0.90 | | 1.14 | | | 1.39 | 1.18 | 1.07 | | 3.6 |
| Mar. 4 | 3.3 | | | | | | 1.41 | | 1.06 | 0.93 | 3.0 |
| Mar. 5 | 1.6 | .94 | | | | | 1.28 | 1.09 | .97 | | 3.5 |
| Mar. 8 | 2.1 | | | 1.14 | | | 1.29 | | | | 3.0 |
| Mar. 9 | 3.0 | .91 | 1.00 | 1.11 | 1.24 | | 1.17 | | | | 3.0 |
| Mar. 11 | 4.2 | | | | | | 1.22 | .99 | .85 | .72 | 4.0 |
| Mar. 13 | 5.3 | .72 | .82 | 1.04 | 1.32 | | | | .99 | | 4.6 |
| Mar. 14 | 3.8 | | | | | | 1.01 | .74 | | .43 | 4.8 |
| Mar. 18 | 6.9 | | | | | | | | | .87 | 4.9 |
| Mar. 24 | 5.6 | | | | 1.27 | 1.54 | 1.27 | 1.11 | .98 | .90 | 4.8 |
| Mar. 25 | 5.3 | .93 | 1.04 | 1.16 | 1.28 | | | 1.04 | .91 | .80 | 6.4 |
| Mar. 26 | 6.1 | .70 | .81 | .97 | | | 1.06 | .87 | | | 7.2 |
| Mar. 27 | 9.8 | .64 | .75 | .88 | 1.06 | | | | | | 11.8 |
| Mar. 28 | 7.2 | | .71 | .79 | .94 | 1.31 | .98 | .80 | .65 | .53 | 12.7 |
| Mar. 29 | 11.4 | | | | 1.03 | | | .78 | .60 | | 12.3 |
| Mar. 30 | 11.4 | | | | | | 1.25 | 1.05 | .95 | .83 | 6.6 |
| **Means** | | .82 | .86 | 1.03 | 1.16 | (1.42) | 1.21 | .96 | .90 | .75 | |
| **Departures** | | −.07 | −.11 | −.07 | −.08 | −.01 | −.03 | −.11 | −.06 | −.10 | |

### Ratio, Boston-Blue Hill on comparable dates

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.61 | 0.84 | 0.86 | 0.90 | | 0.82 | | | | |

*Extrapolated.

TABLE 2.—*Daily totals and weekly means of solar radiation (direct+diffuse) received on a horizontal surface*

[Gram-calories per square centimeter]

| Date | Washington, D. C. | Madison, Wis. | Lincoln, Nebr. | East Lansing, Mich. | New York, N. Y. | Fresno, Calif. | Fairbanks, Alaska | Columbia, Mo. | Boston, Mass. | Nashville, Tenn. | Twin Falls, Idaho | La Jolla, Calif. | Riverside, Calif. | Blue Hill, Mass. | Portland, Maine | Ithaca, N. Y. | Newport, R. I. | State College, Pa. | Put-in-Bay, Ohio | East Wareham, Mass. | Davis, Calif. | Tooele, Utah | Boulder, Colo. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* |
| Feb. 26 | 30 | 440 | 412 | 90 | 23 | 443 | 90 | 164 | 54 | 60 | 398 | 442 | 518 | 75 | 94 | 38 | 71 | 51 | 32 | 100 | 407 | 547 | 474 |
| Feb. 27 | 182 | 367 | 214 | 264 | 245 | 168 | 21 | 191 | 215 | 56 | 383 | 169 | 154 | 227 | 303 | 97 | 186 | 267 | 292 | 194 | 412 | 476 | 440 |
| Feb. 28 | 33 | 364 | 270 | 138 | 100 | 413 | 54 | 354 | 353 | 117 | 383 | 270 | 90 | 383 | 407 | 260 | ------ | 90 | 101 | 337 | 453 | 384 | 406 |
| Mar. 1 | 434 | 356 | 256 | 328 | 384 | 397 | 56 | 252 | 360 | 342 | 328 | 401 | 328 | 413 | 420 | 397 | 394 | 412 | 417 | 401 | 230 | 451 | 220 |
| Mar. 2 | 173 | 131 | 22 | 29 | 137 | 443 | 70 | 46 | 166 | 136 | 159 | 192 | 496 | 133 | 95 | 92 | ------ | 124 | 48 | 130 | 458 | 296 | 60 |
| Mar. 3 | 59 | 459 | 399 | 222 | 89 | 129 | 100 | 297 | 158 | 52 | 192 | 217 | 227 | 142 | 70 | 150 | ------ | 176 | 191 | 125 | 143 | 211 | 389 |
| Mar. 4 | 226 | 362 | 280 | 364 | 357 | 438 | 115 | 274 | 402 | 199 | 286 | 148 | 74 | 413 | 444 | ------ | ------ | 474 | 417 | 374 | 363 | 258 | 282 |
| **Mean** | **162** | **354** | **265** | **205** | **191** | **348** | **72** | **225** | **244** | **137** | **304** | **263** | **269** | **255** | **262** | **172** | ------ | **228** | **214** | **237** | **352** | **375** | **325** |
| **Departure** | **−115** | **+82** | **−41** | **−11** | **−68** | **−5** | **−55** | **−31** | **+16** | **−103** | **+16** | **−121** | **−76** | **−35** | ------ | **−55** | ------ | **−7** | **−23** | **−41** | **+28** | ------ | ------ |
| Mar. 5 | 58 | 100 | 221 | 260 | 176 | 441 | 95 | 58 | 359 | 184 | 440 | 389 | 535 | 402 | 401 | 342 | 366 | 160 | 329 | 411 | 419 | 500 | 142 |
| Mar. 6 | 85 | 257 | 254 | 38 | 38 | 477 | 98 | 157 | 50 | 226 | 317 | 430 | 517 | 54 | 92 | 31 | 30 | 76 | 42 | 42 | 379 | 275 | 370 |
| Mar. 7 | 157 | 481 | 426 | 411 | 220 | 484 | 138 | 472 | 139 | 64 | 381 | 470 | 530 | 141 | 434 | 377 | 141 | 123 | 441 | 138 | 452 | 543 | 467 |
| Mar. 8 | 442 | 285 | 433 | 211 | 414 | 485 | 132 | 485 | 356 | 405 | 325 | 484 | 530 | 422 | 458 | 421 | 420 | 481 | 364 | 448 | 450 | 509 | 466 |
| Mar. 9 | 363 | 416 | 399 | 186 | 394 | 471 | 84 | 400 | 345 | 440 | 416 | 481 | 522 | 439 | 462 | 245 | 424 | 363 | 306 | 408 | 483 | 559 | 448 |
| Mar. 10 | 319 | 495 | 370 | 194 | 119 | 448 | 74 | 474 | 185 | 395 | 382 | 444 | 512 | 232 | 325 | 68 | 251 | 169 | 253 | ------ | 424 | 549 | 467 |
| Mar. 11 | 432 | 91 | 505 | 249 | 418 | 461 | 40 | 120 | 338 | 413 | 357 | 390 | 491 | 346 | 438 | ------ | 337 | 470 | 403 | ------ | 402 | 561 | 436 |
| **Mean** | **265** | **304** | **373** | **221** | **254** | **467** | **94** | **310** | **253** | **304** | **374** | **441** | **519** | **291** | **373** | **247** | **281** | **263** | **305** | **289** | **430** | **499** | **400** |
| **Departure** | **−45** | **+6** | **+46** | **−12** | **−20** | **+67** | **−59** | **+4** | **+7** | **+34** | **+27** | **+18** | **+105** | **−6** | ------ | **−12** | **−18** | **−2** | **+43** | **+8** | **+68** | ------ | ------ |
| Mar. 12 | 292 | 506 | 457 | 396 | 146 | 442 | 231 | 512 | 127 | 45 | 292 | 183 | 403 | 167 | 210 | 419 | 254 | 137 | 416 | 232 | 278 | 509 | 457 |
| Mar. 13 | 493 | 458 | 444 | 386 | 448 | 231 | 237 | 500 | 430 | 360 | 320 | 305 | 156 | 412 | 465 | 426 | 459 | 463 | 486 | 474 | 477 | 274 | 239 |
| Mar. 14 | 410 | 290 | 125 | 346 | 340 | 155 | 148 | 392 | 402 | 331 | 154 | 183 | 166 | 422 | 439 | 308 | 427 | 434 | 416 | 426 | 122 | 232 | 356 |
| Mar. 15 | 354 | 126 | 312 | 189 | 117 | 387 | 222 | 482 | 350 | 112 | 380 | 201 | 367 | 344 | 392 | 26 | 198 | 357 | 260 | 254 | 427 | 247 | 183 |
| Mar. 16 | 427 | 433 | 255 | 350 | 248 | 174 | 257 | 421 | 166 | 368 | 340 | 348 | 368 | 147 | 145 | 328 | 160 | 395 | 443 | 156 | 89 | 623 | 505 |
| Mar. 17 | 319 | 423 | 511 | 260 | 256 | 443 | 247 | 554 | 311 | 180 | 159 | 205 | 149 | 333 | 336 | 174 | 368 | 232 | 286 | 318 | 303 | 194 | 338 |
| Mar. 18 | 354 | 424 | 377 | 385 | 384 | 553 | 257 | 257 | 456 | 405 | 346 | 528 | 542 | 430 | 485 | 458 | 423 | 448 | 486 | 411 | 527 | 422 | 346 |
| **Mean** | **378** | **380** | **354** | **330** | **277** | **341** | **228** | **445** | **320** | **257** | **284** | **279** | **307** | **321** | **353** | **306** | **327** | **352** | **399** | **324** | **318** | **370** | **346** |
| **Departure** | **+58** | **+65** | **+9** | **+65** | **−2** | **−62** | **+31** | **+111** | **+61** | **−42** | **−47** | **−106** | **−77** | **+27** | ------ | **+72** | **+30** | **+64** | **+97** | **+35** | **−82** | ------ | ------ |
| Mar. 19 | 415 | 242 | 133 | 137 | 174 | 504 | 264 | 76 | 153 | 287 | 452 | 517 | 563 | 173 | 135 | 87 | 226 | 176 | 308 | 203 | 338 | 653 | 540 |
| Mar. 20 | 348 | 239 | 530 | 34 | 303 | 225 | 279 | 60 | 341 | 238 | 224 | 533 | 586 | 318 | 180 | 58 | 331 | 289 | 58 | 331 | 110 | 588 | 508 |
| Mar. 21 | 196 | 568 | 531 | 427 | 29 | 123 | 266 | 550 | 15 | 54 | 403 | 358 | 184 | 26 | 47 | 21 | 33 | 59 | 240 | 28 | 553 | 601 | 511 |
| Mar. 22 | 58 | 513 | 443 | 435 | 45 | 73 | 285 | 539 | 67 | 527 | 321 | 297 | 149 | 75 | 91 | 46 | 50 | 111 | 528 | 92 | 91 | 569 | 238 |
| Mar. 23 | 507 | 456 | 495 | 365 | 427 | 524 | 206 | 513 | 168 | 365 | 100 | 527 | 456 | 150 | 234 | 328 | 235 | 371 | 462 | 171 | 556 | 266 | 506 |
| Mar. 24 | 444 | 266 | 286 | 368 | 530 | 534 | 302 | 319 | 473 | 306 | 452 | 551 | 606 | 478 | 510 | 509 | 504 | 545 | 426 | 492 | 486 | 617 | 319 |
| Mar. 25 | 474 | 179 | 443 | 289 | 460 | 167 | 349 | 170 | 489 | 306 | 441 | 531 | 584 | 506 | 538 | 513 | 500 | 533 | 470 | 519 | 84 | 642 | 562 |
| **Mean** | **349** | **352** | **409** | **294** | **281** | **307** | **279** | **318** | **244** | **298** | **342** | **473** | **447** | **247** | **248** | **223** | **279** | **298** | **356** | **262** | **317** | **562** | **455** |
| **Departure** | **+7** | **+18** | **+30** | **−4** | **−58** | **−139** | **+58** | **−7** | **−46** | **−31** | **−57** | **+21** | **+45** | **−122** | ------ | **−77** | **−127** | **−27** | **+17** | **−59** | **−141** | ------ | ------ |
| Mar. 26 | 477 | 430 | 540 | 231 | 416 | 339 | 295 | 583 | 472 | 462 | 89 | 550 | 467 | 478 | 476 | 432 | 503 | 510 | 215 | 497 | 459 | 298 | 557 |
| Mar. 27 | 518 | 533 | 538 | 437 | 328 | 475 | 314 | 580 | 373 | 543 | 104 | 557 | 629 | 383 | 423 | 247 | 362 | 418 | 491 | 394 | 400 | 384 | 582 |
| Mar. 28 | 521 | 572 | 570 | 407 | 398 | 487 | 231 | 525 | 438 | 497 | 312 | 527 | 538 | 457 | 491 | 489 | 477 | 535 | 522 | 480 | 518 | 501 | 367 |
| Mar. 29 | 450 | 417 | 509 | 61 | 425 | 449 | 283 | 355 | 456 | 327 | 367 | 539 | 578 | 465 | 499 | 377 | 472 | 436 | 154 | 459 | 621 | 649 | 437 |
| Mar. 30 | 469 | 369 | 524 | 315 | 504 | 580 | 229 | 208 | 499 | 376 | 519 | 554 | 625 | 461 | 492 | 541 | 491 | 547 | 327 | 455 | 618 | 671 | 551 |
| Mar. 31 | 410 | 502 | 551 | 265 | 218 | 585 | 271 | 585 | 97 | 370 | 340 | 572 | 606 | 103 | 106 | 209 | 155 | 350 | 283 | 99 | 617 | 650 | 465 |
| Apr. 1 | 552 | 561 | 550 | 352 | 511 | 631 | 292 | ------ | 527 | 108 | 411 | 121 | 489 | 532 | 568 | 421 | 526 | 548 | 399 | 528 | 650 | 343 | 58 |
| **Mean** | **485** | **483** | **540** | **295** | **400** | **506** | **281** | **423** | **409** | **383** | **306** | **488** | **562** | **412** | **436** | **388** | **427** | **478** | **342** | **416** | **555** | **512** | **431** |
| **Departure** | **+131** | **+127** | **+161** | **−22** | **+71** | **+35** | **−5** | **+20** | **+61** | **+8** | **−63** | **−3** | **+149** | **+29** | ------ | **+92** | **+54** | **+116** | **−21** | **+40** | **+40** | ------ | ------ |
| **Accumulated Departures on Apr. 1, 1945** | | | | | | | | | | | | | | | | | | | | | | | |
| | **+252** | **+2,660** | **−1,589** | **−966** | **−175** | **+14** | **−875** | **+105** | **+1,127** | **−2,303** | **−2,541** | **−2,184** | **+2,044** | **−1,022** | ------ | **+511** | **−1,365** | **+3,129** | **+994** | **−21** | **−588** | ------ | ------ |

## POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR MARCH 1945

By LUCY T. DAY

[Equatorial Division, U. S. Naval Observatory]

[Communicated by Commodore J. F. HELLWEG, U. S. N. (Ret.) Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitude is measured from the central meridian, positive toward the west. Latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day, under longitude, latitude, area of spot or group, and spot count are included assumed longitude of center of the disk, assumed latitude of center of the disk, total areas of spot and groups, and total spot count.

| Date | Eastern standard time | Mount Wilson group No. | Heliographic: Difference in longitude | Heliographic: Longitude | Heliographic: Latitude | Heliographic: Distance from center of disk | Area of spot or group | Spot count | Plate quality | Observatory |
|---|---|---|---|---|---|---|---|---|---|---|
| *1945* | h m | | ° | ° | ° | ° | | | | |
| March 1 | 10 34 | 7725 | +4 | 124 | −14 | 8 | 24 | 3 | F | U. S. Naval. |
| | | 7725 | +9 | 129 | −16 | 12 | 24 | 2 | | |
| | | 7725 | +13 | 133 | −17 | 17 | 61 | 3 | | |
| | | | | (120) | (−7) | | 109 | 8 | | |

See footnotes at end of table.

## POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR MARCH 1945—Continued

| Date | Eastern standard time | Mount Wilson group No. | Heliographic: Difference in longitude | Heliographic: Longitude | Heliographic: Latitude | Heliographic: Distance from center of disk | Area of spot or group | Spot count | Plate quality | Observatory |
|---|---|---|---|---|---|---|---|---|---|---|
| *1945* | h m | | ° | ° | ° | ° | | | | |
| 2 | 12 14 | 7729 | −83 | 23 | −15 | 83 | 679 | 1 | P | U. S. Naval. |
| | | 7725 | +17 | 123 | −18 | 21 | 24 | 1 | | |
| | | 7725 | +25 | 131 | −15 | 26 | 12 | 1 | | |
| | | 7725 | +27 | 133 | −17 | 29 | 73 | 3 | | |
| | | | | (106) | (−7) | | 788 | 6 | | |
| 4 | 13 52 | 7729 | −54 | 25 | −15 | 54 | 533 | 1 | F | Do. |
| | | (*) | −37 | 42 | −14 | 37 | 6 | 2 | | |
| | | 7728 | +57 | 136 | −17 | 57 | 36 | 1 | | |
| | | 7727 | +64 | 143 | −28 | 65 | 36 | 1 | | |
| | | | | (79) | (−7) | | 611 | 5 | | |
| 5 | 12 45 | 7729 | −42 | 24 | −15 | 42 | 533 | 1 | † | Mt. Wilson. |
| | | 7728 | +70 | 136 | −17 | 71 | 24 | 1 | | |
| | | 7727 | +77 | 143 | −28 | 77 | 12 | 1 | | |
| | | | | (66) | (−7) | | 569 | 3 | | |

## POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR MARCH 1945—Continued

| Date | Eastern standard time | Mount Wilson group No. | Heliographic: Difference in longitude | Heliographic: Longitude | Heliographic: Latitude | Heliographic: Distance from center of disk | Area of spot or group | Spot count | Plate quality | Observatory |
|---|---|---|---|---|---|---|---|---|---|---|
| *1945* | h m | | ° | ° | ° | ° | | | | |
| 6 | 13 42 | 7729 | −30 | 22 | −15 | 31 | 36 | 1 | G | U.S. Naval. |
| | | 7729 | −28 | 24 | −15 | 29 | 533 | 1 | | |
| | | 7728 | +85 | 137 | −17 | 85 | 12 | 1 | | |
| | | | | (52) | (−7) | | | | | |
| | | | | | | | 581 | 3 | | |
| 7 | 10 32 | 7729 | −16 | 25 | −15 | 17 | 461 | 1 | G | Do. |
| | | | | (41) | (−7) | | | | | |
| | | | | | | | 461 | 1 | | |
| 8 | 10 19 | 7729 | −9 | 19 | −18 | 15 | 12 | 1 | F | Do. |
| | | 7729 | −3 | 25 | −15 | 9 | 461 | 1 | | |
| | | | | (28) | (−7) | | | | | |
| | | | | | | | 473 | 2 | | |
| 9 | 10 34 | 7729 | +5 | 19 | −18 | 12 | 24 | 5 | G | Do. |
| | | 7729 | +8 | 22 | −16 | 12 | 12 | 2 | | |
| | | 7729 | +11 | 25 | −15 | 13 | 436 | 1 | | |
| | | 7730 | +18 | 32 | −20 | 22 | 24 | 8 | | |
| | | | | (14) | (−7) | | | | | |
| | | | | | | | 496 | 16 | | |
| 10 | 10 41 | 7729 | +23 | 24 | −14 | 23 | 412 | 1 | G | Do. |
| | | 7730 | +29 | 30 | −19 | 32 | 24 | 2 | | |
| | | 7730 | +32 | 33 | −20 | 33 | 48 | 1 | | |
| | | | | (1) | (−7) | | | | | |
| | | | | | | | 484 | 4 | | |
| 11 | 10 27 | 7729 | +37 | 25 | −14 | 37 | 412 | 3 | F | Do. |
| | | 7730 | +43 | 31 | −18 | 44 | 12 | 2 | | |
| | | 7730 | +48 | 36 | −19 | 48 | 61 | 1 | | |
| | | | | (348) | (−7) | | 485 | 6 | | |
| 12 | 10 31 | 7729 | +49 | 24 | −14 | 49 | 412 | 4 | G | Do. |
| | | 7730 | +57 | 32 | −18 | 57 | 6 | 2 | | |
| | | 7730 | +61 | 36 | −18 | 61 | 48 | 1 | | |
| | | | | (335) | (−7) | | 466 | 7 | | |
| 13 | 10 29 | 7729 | +59 | 21 | −16 | 59 | 12 | 3 | G | Do. |
| | | 7729 | +63 | 25 | −14 | 63 | 364 | 4 | | |
| | | 7730 | +74 | 36 | −19 | 75 | 6 | 1 | | |
| | | | | (322) | (−7) | | 382 | 8 | | |
| 14 | 10 35 | 7729 | +76 | 25 | −15 | 77 | 364 | 3 | F | Do. |
| | | | | (309) | (−7) | | 364 | 3 | | |
| 15 | 10 58 | | | No | spots | | | | F | Do. |
| 16 | 10 27 | 7731 | −65 | 217 | +26 | 71 | 6 | 2 | G | Do. |
| | | | | (282) | (−7) | | 6 | 2 | | |
| 17 | 10 56 | 7731 | −51 | 218 | +26 | 59 | 12 | 6 | G | Do. |
| | | | | (269) | (−7) | | 12 | 6 | | |
| 18 | 10 3 | 7731 | −40 | 216 | +27 | 52 | 12 | 1 | F | Mt. Wilson. |
| | | 7731 | −37 | 219 | +26 | 49 | 12 | 2 | | |
| | | | | (256) | (−7) | | 24 | 3 | | |
| 19 | 10 32 | 7731 | −23 | 220 | +26 | 40 | 16 | 9 | G | Do. |
| | | | | (243) | (−7) | | 16 | 9 | | |
| 20 | 10 20 | 7731 | −8 | 222 | +24 | 32 | 48 | 10 | G | U. S. Naval |
| | | | | (230) | (−7) | | 48 | 10 | | |
| 21 | 14 4 | 7732 | −87 | 127 | −30 | 87 | 242 | 2 | G | Do. |
| | | 7732 | −81 | 133 | −29 | 81 | 485 | 1 | | |
| | | | | (214) | (−7) | | 727 | 3 | | |
| 23 | 10 36 | 7732 | −65 | 125 | −32 | 67 | 218 | 9 | G | Do. |
| | | 7732 | −59 | 131 | −30 | 60 | 485 | 3 | | |
| | | | | (190) | (−7) | | 703 | 12 | | |
| 24 | 10 24 | 7732 | −52 | 125 | −32 | 54 | 218 | 6 | VG | Do. |
| | | 7732 | −50 | 127 | −31 | 53 | 48 | 9 | | |
| | | 7732 | −47 | 130 | −31 | 50 | 485 | 1 | | |
| | | | | (177) | (−7) | | 751 | 16 | | |
| 25 | 11 19 | 7732 | −39 | 124 | −32 | 43 | 145 | 5 | F | Do. |
| | | 7732 | −36 | 127 | −31 | 41 | 97 | 6 | | |
| | | 7732 | −33 | 130 | −31 | 38 | 485 | 1 | | |
| | | | | (163) | (−7) | | 727 | 12 | | |

## POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR MARCH 1945—Continued

| Date | Eastern standard time | Mount Wilson group No. | Heliographic: Difference in longitude | Heliographic: Longitude | Heliographic: Latitude | Heliographic: Distance from center of disk | Area of spot or group | Spot count | Plate quality | Observatory |
|---|---|---|---|---|---|---|---|---|---|---|
| *1945* | h m | | ° | ° | ° | ° | | | | |
| 26 | 10 39 | 7733 | −73 | 77 | −21 | 74 | 24 | 1 | F | U.S. Naval. |
| | | 7732 | −26 | 124 | −32 | 34 | 242 | 14 | | |
| | | 7732 | −21 | 129 | −31 | 31 | 436 | 1 | | |
| | | (*) | +70 | 220 | +20 | 75 | 12 | 4 | | |
| | | | | (150) | (−7) | | 714 | 20 | | |
| 27 | 10 26 | 7733 | −64 | 73 | −20 | 64 | 73 | 5 | G | Do. |
| | | 7733 | −59 | 78 | −21 | 59 | 121 | 9 | | |
| | | 7732 | −12 | 125 | −32 | 27 | 242 | 6 | | |
| | | 7732 | − 8 | 129 | −31 | 26 | 412 | 2 | | |
| | | | | (137) | (−7) | | 848 | 22 | | |
| 28 | 10 32 | 7734 | −66 | 58 | +35 | 74 | 24 | 1 | F | Do. |
| | | 7733 | −50 | 74 | −20 | 50 | 218 | 3 | | |
| | | 7733 | −46 | 78 | −21 | 46 | 242 | 5 | | |
| | | 7732 | +1 | 125 | −32 | 25 | 194 | 6 | | |
| | | 7732 | +5 | 129 | −31 | 24 | 412 | 2 | | |
| | | | | (124) | (−7) | | 1090 | 17 | | |
| 29 | 10 43 | 7734 | −52 | 59 | +35 | 65 | 48 | 1 | VG | Do. |
| | | 7733 | −38 | 73 | −20 | 40 | 339 | 12 | | |
| | | 7733 | −35 | 76 | −22 | 36 | 73 | 9 | | |
| | | 7733 | −32 | 79 | −22 | 33 | 388 | 6 | | |
| | | 7732 | +15 | 126 | −33 | 29 | 97 | 15 | | |
| | | 7732 | +18 | 129 | −31 | 30 | 388 | 1 | | |
| | | | | (111) | (−7) | | 1333 | 44 | | |
| 30 | 10 20 | 7734 | −39 | 59 | +34 | 55 | 48 | 1 | G | Do. |
| | | 7733 | −25 | 73 | −21 | 28 | 388 | 18 | | |
| | | 7733 | −19 | 79 | −22 | 23 | 485 | 9 | | |
| | | 7732 | +27 | 125 | −33 | 36 | 727 | 2 | | |
| | | 7732 | +30 | 128 | −31 | 37 | 436 | 1 | | |
| | | | | (98) | (−7) | | 2084 | 31 | | |
| 31 | 10 44 | 7734 | −25 | 59 | +34 | 47 | 48 | 1 | F | Do. |
| | | 7733 | −12 | 72 | −21 | 18 | 436 | 13 | | |
| | | 7733 | −6 | 78 | −22 | 16 | 509 | 7 | | |
| | | 7732 | +41 | 125 | −33 | 46 | 48 | 5 | | |
| | | 7732 | +43 | 127 | −31 | 47 | 461 | 2 | | |
| | | | | (84) | (−7) | | 1502 | 28 | | |

**Mean daily area for 29 days=581**

* Not numbered.
† Data from Mount Wilson charts.
VG=very good; G=good; F=fair; P=poor.

## PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR FEBRUARY 1945

[Based on observations at Zurich except as indicated by an asterisk. Data furnished through the courtesy of Prof. W. Brunner, Swiss Federal Observatory, Zurich, Switzerland.]

| Date | Relative numbers | Date | Relative numbers | Date | Relative numbers |
|---|---|---|---|---|---|
| 1 | 0 | 11 | 0 | 21 | 7 |
| 2 | 8 | 12 | 0 | 22 | 7 |
| 3 | 18 | 13 | *d*16 | 23 | *d*11 |
| 4 | 23 | 14 | 10 | 24 | 12 |
| 5 | *19 | 15 | 14 | 25 | 19 |
| 6 | *9 | 16 | 14 | 26 | *21 |
| 7 | *9 | 17 | 15 | 27 | 16 |
| 8 | 9 | 18 | *a12 | 28 | *a*16 |
| 9 | 14 | 19 | 29 | | |
| 10 | 0 | 20 | 18 | | |

**Mean, 28 days=12.4**

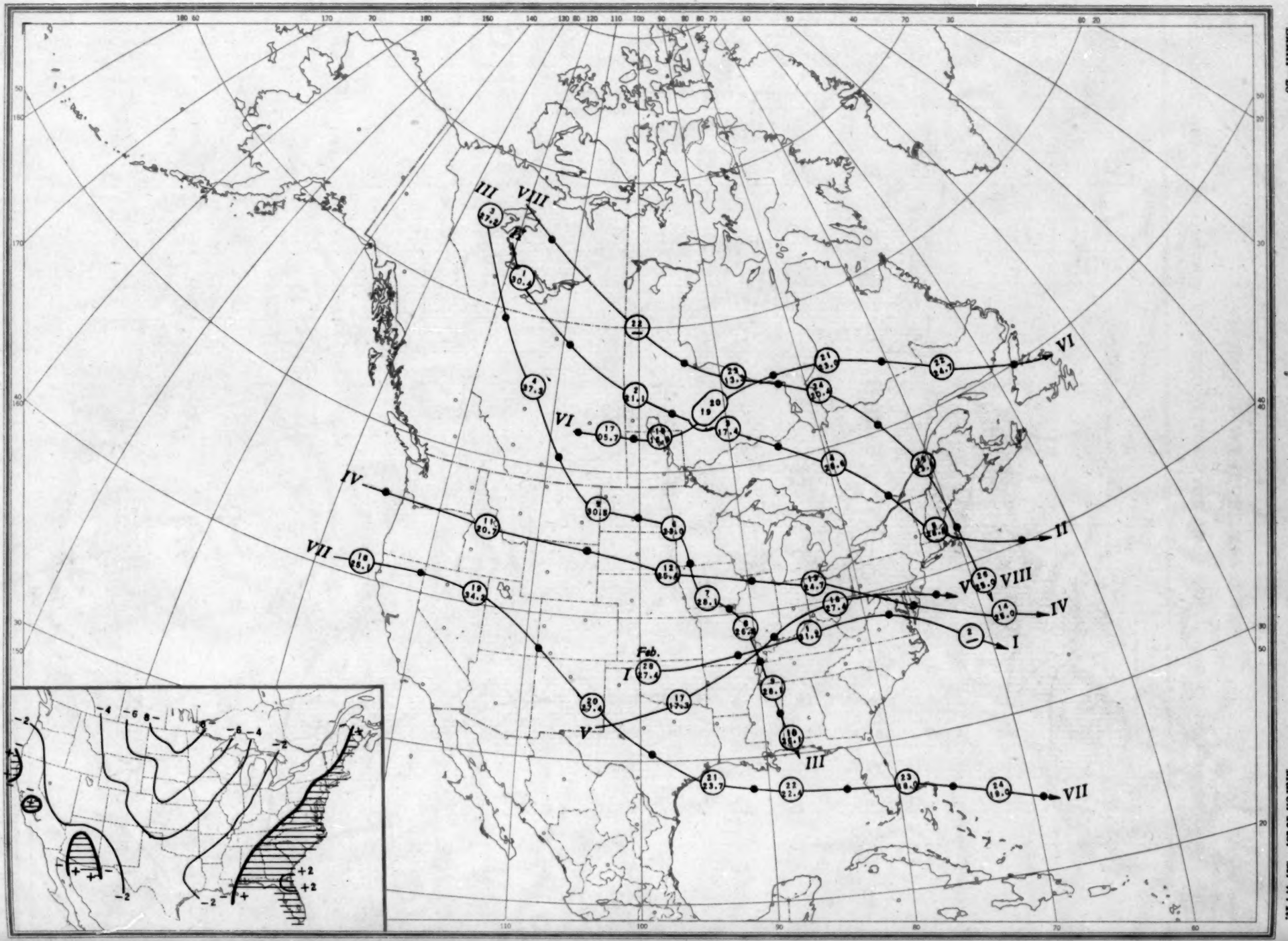
* Observed at Arosa or Locarno.
*a* Passage of an average sized group through the central meridian.
*b* Passage of a large group through the central meridian.
*c* New formation of a group developing into a middle sized or large center of activity; E, on the eastern part of the Sun's disc; W, on the western part; M, in the central circle zone.
*d* Entrance of a large or average sized center of activity on the east limb.

Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, March 1945

**Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, March 1945**

## Chart II. Tracks of Centers of Anticyclones, March 1945. (Inset) Departure of Monthly Mean Pressure from Normal

(Plotted by D. R. Harris)



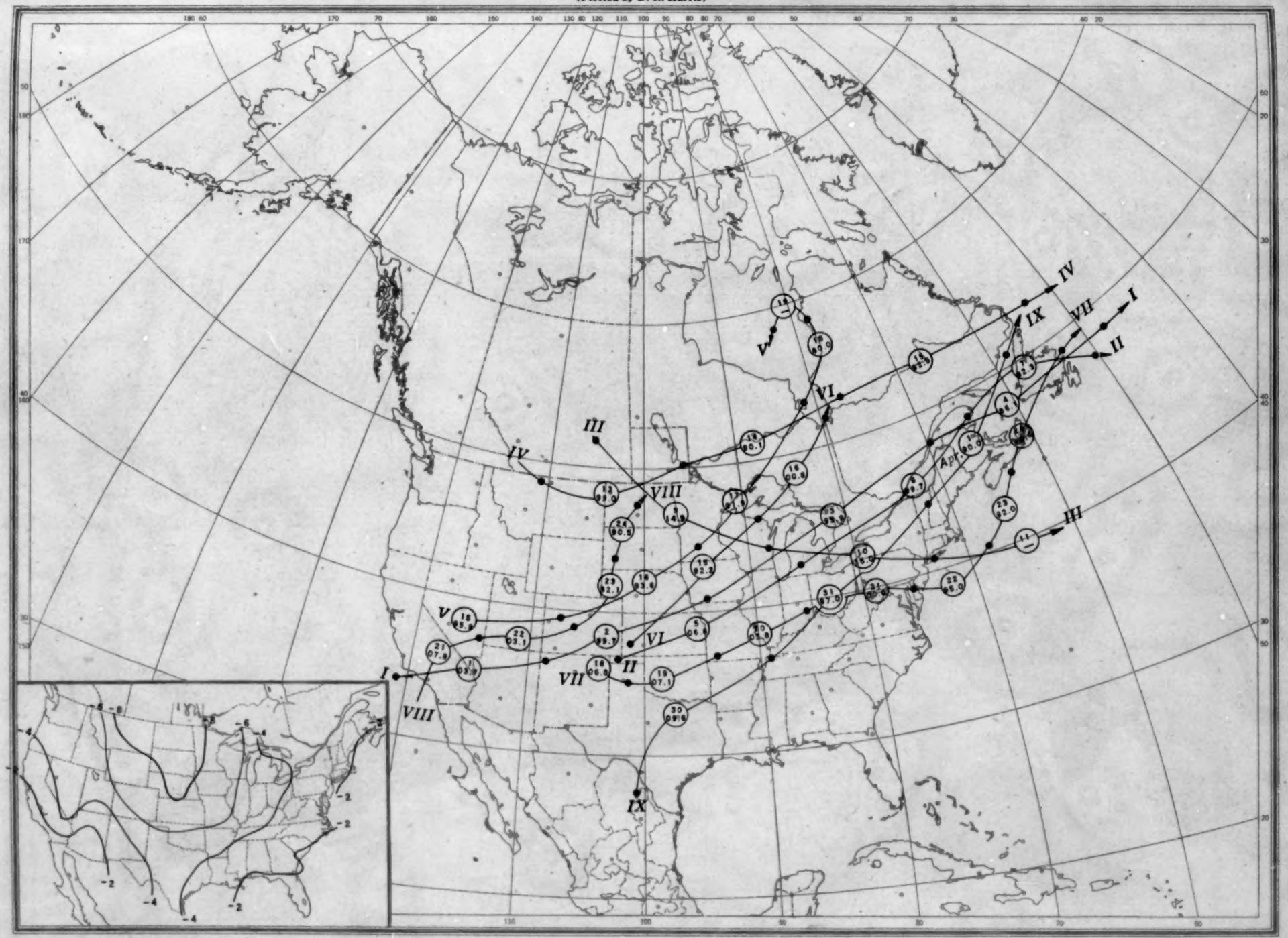

Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

## Chart III. Tracks of Centers of Cyclones, March 1945. (Inset) Change in Mean Pressure from Preceding Month

Circle indicates position of antieyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of antieyclone at 7:30 p. m. (75th meridian time)

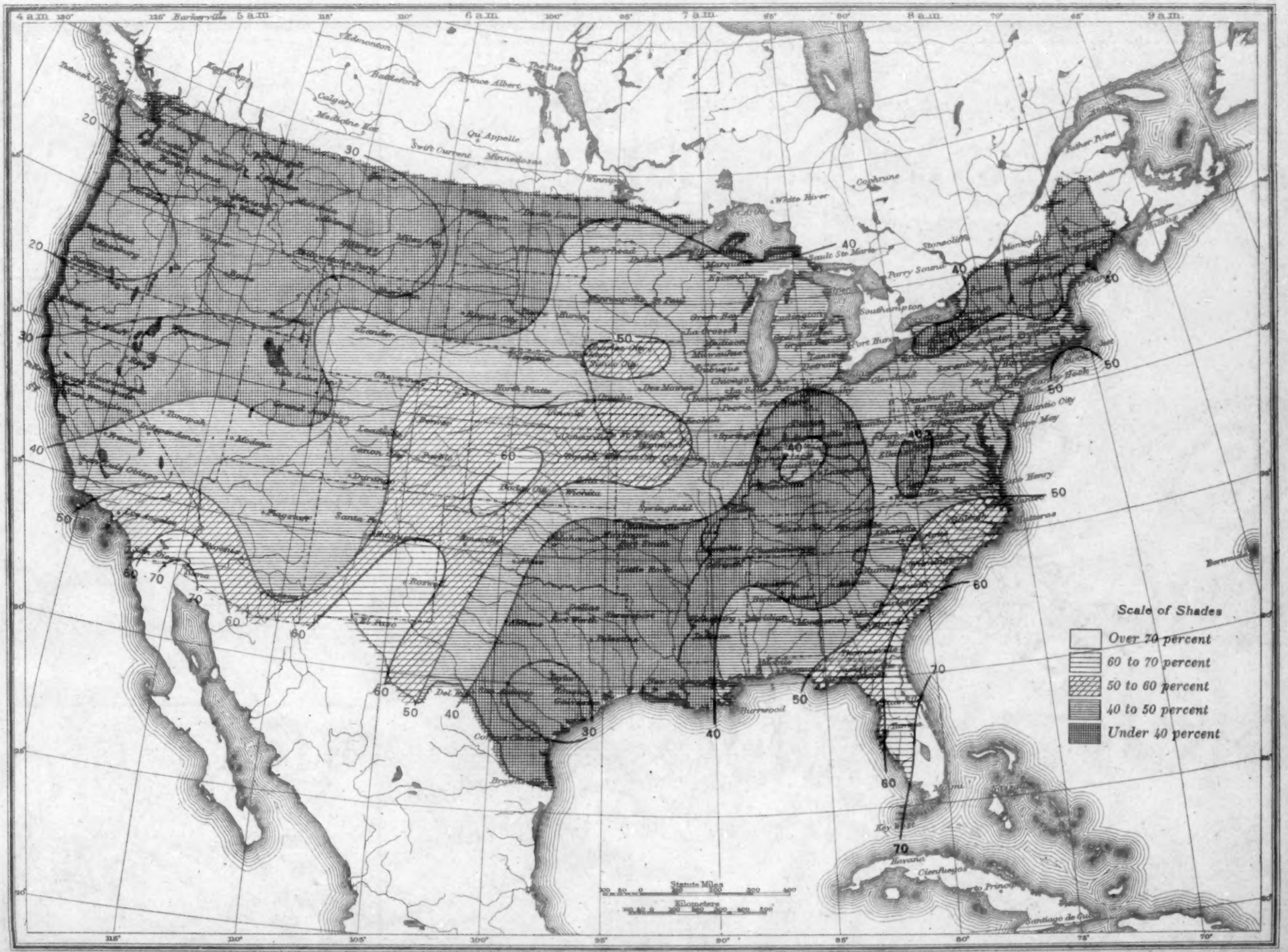
## Chart III. Tracks of Centers of Cyclones, March 1945. (Inset) Change in Mean Pressure from Preceding Month

(Plotted by D. R. Harris)




Circle indicates position of cyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of cyclone at 7:30 p. m. (75th meridian time)

## Chart IV. Percentage of Clear Sky Between Sunrise and Sunset, March 1945






## Chart V. Total Precipitation, Inches, March 1945. (Inset) Departure of Precipitation from Normal

**Chart V. Total Precipitation, Inches, March 1945. (Inset) Departure of Precipitation from Normal**

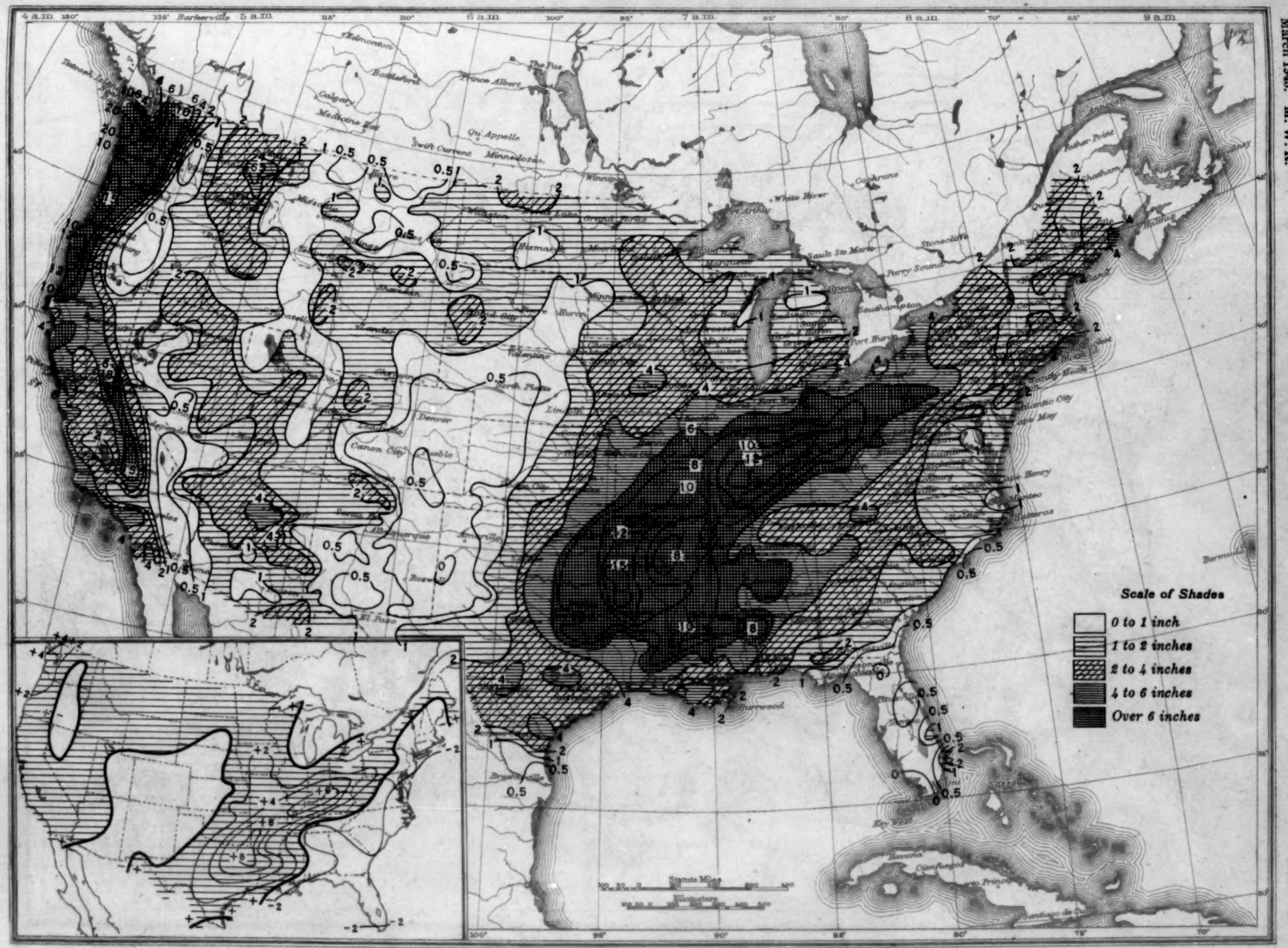


Chart VI. Isobars (mb), at Sea Level and Isotherms (°F.) at Surface; Prevailing Winds, March 1945

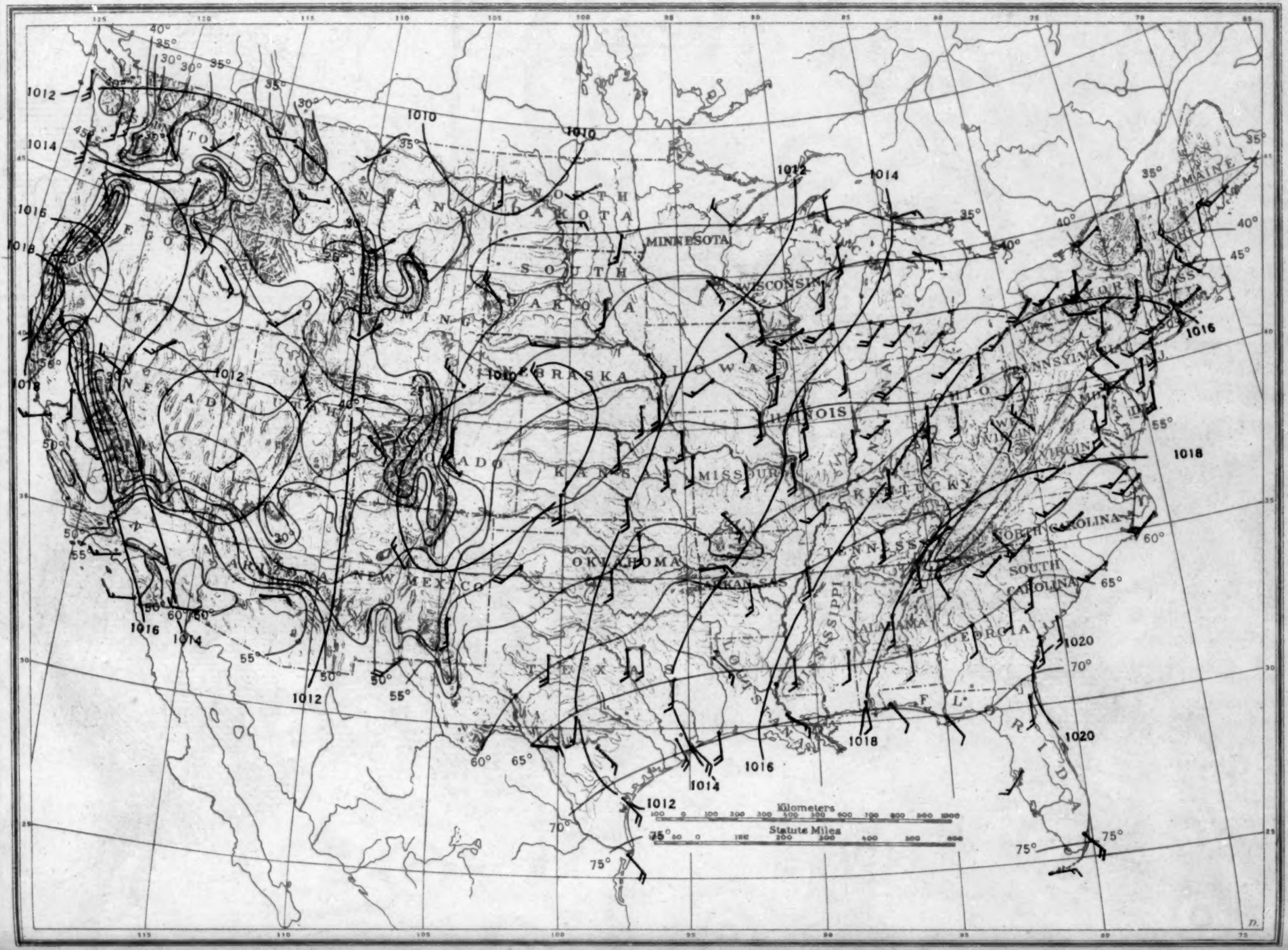


Chart VII. Total Snowfall, Inches, March 1945. (Inset) Depth of Snow on the Ground at 7:30 p. m., Monday, March 26, 1945

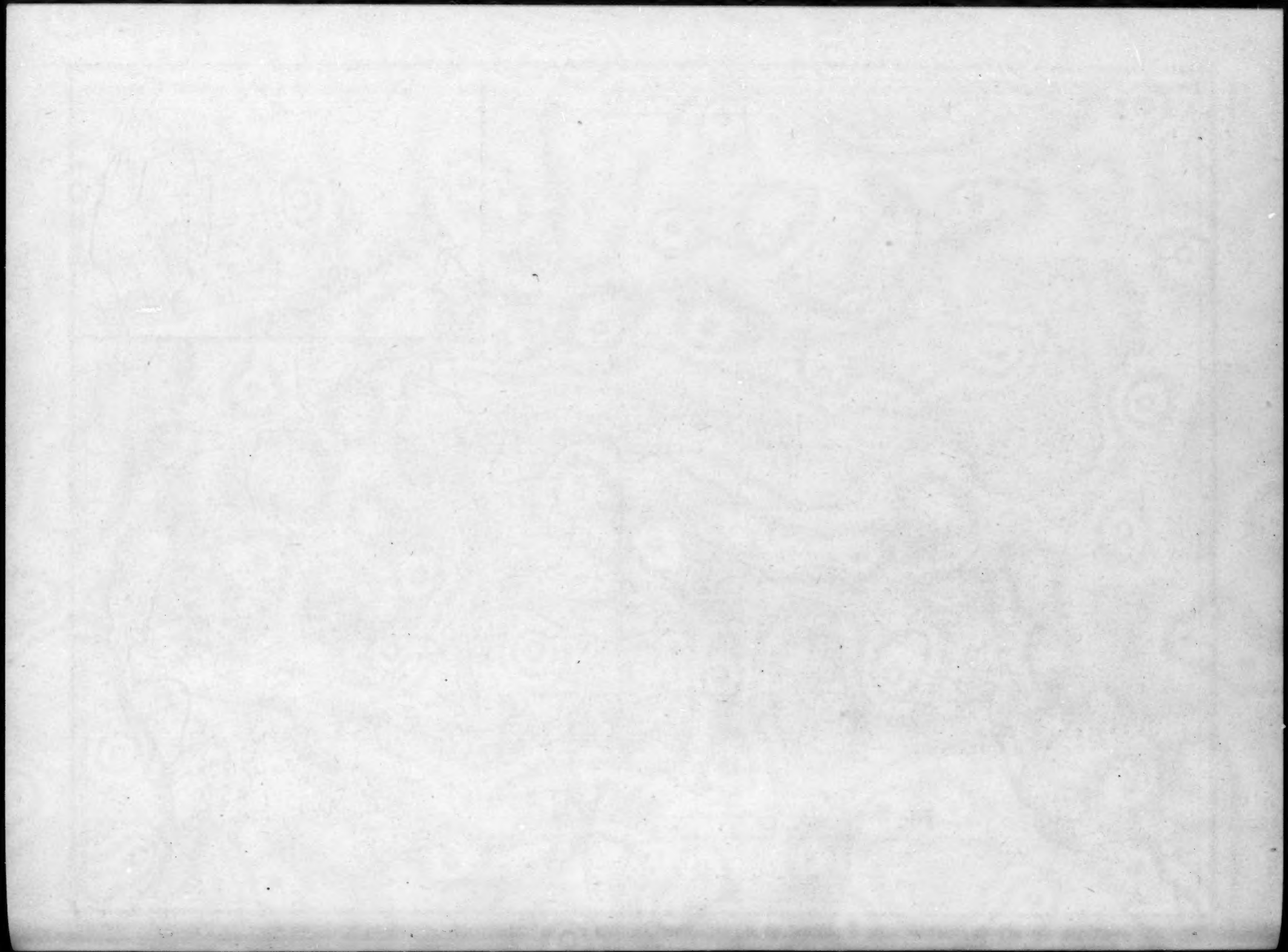
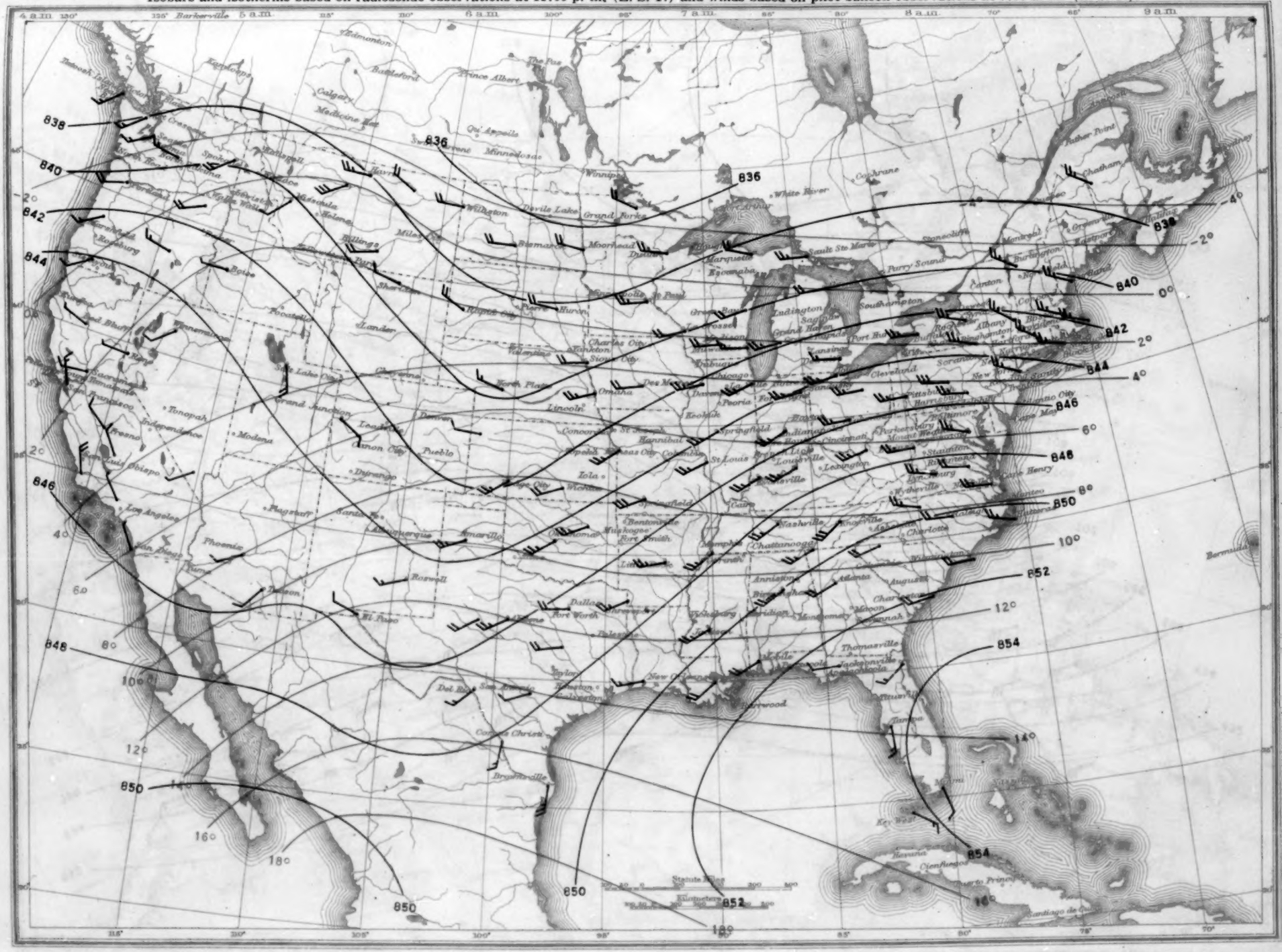


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) March 1945

**Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) March 1945**

Isobars and isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).



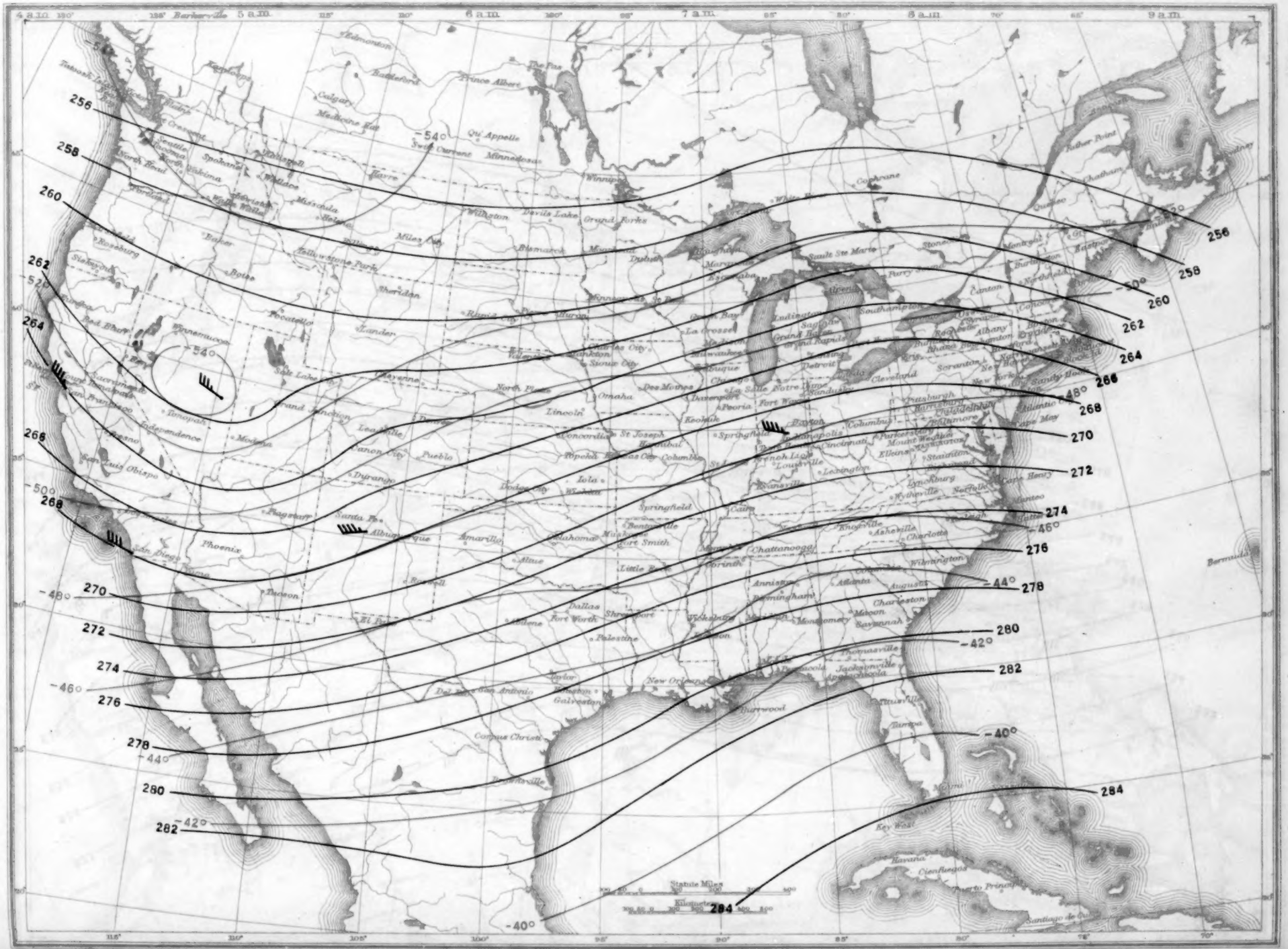
## Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) March 1945

Isobars and isotherms based on radiosonde observations 11:00 p. m. at (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

## Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) March 1945

## Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) March 1945

Isobars and isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

## Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) March 1945

Isobars and isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).